# PRODUCTS NOT MADE IN GEORGIA

by Amy Collins



Industrial Development Division
Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY

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Georgia Institute of Technology
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## Foreword

Over the years since 1956, the Industrial Development Division of the Engineering Experiment Station at Georgia Tech has analyzed and reported on manufacturing opportunities in Georgia. Out of this activity have come more than 100 published reports on products which could be manufactured profitably in the state. Many of these reports have been instrumental in company decisions to locate plants in Georgia.

This report by Mrs. Amy Collins takes a somewhat different and new look at some possibilities for Georgia by identifying 37 selected products not presently produced in Georgia which seem to have manufacturing and profit potential. Final determination of these potentials will require additional study and analysis. Concerns looking for new product lines and new venture groups seeking products to manufacture may want to consider seriously some of the possibilities outlined in this report.

As with all IDD reports, the reader's comments and suggestions are welcomed.

Ross W. Hammond, Chief
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# INTRODUCTION

The basic list of products not made in Georgia was determined from examination of the 1971 Georgia Manufacturing Directory,[1/] which, for each company, gives up to four different products as defined by the four-digit level of the Standard Industrial Classification code (SIC).[2/] Industries were included in the list only where the Directory showed no production in Georgia of any of the items classified in a particular four-digit grouping.

This leaves out many other products that are not made in Georgia, since a company producing just one item from the several included in a four-digit grouping would mean exclusion of that entire classification from the list. In the 1967 Census of Manufactures a seven-digit SIC code was used for 10,500 individual products, grouped into approximately 1,200 separate classes (five-digit code), assigned to some 420 four-digit industries. A check of products in such detail was not possible in this limited study.

The complete list of products not made in Georgia, by four-digit SIC code as described, totaled 68 industries, and is given in Appendix A. For a variety of reasons (also given in Appendix A) 31 industries were excluded as being unlikely to locate in Georgia at the present time. Brief reviews of the remaining 37 industries form the main body of this report. No detailed study was done for any category -- the chief object being to draw attention to the products so that the question "Why not?" might spark in-depth examinations of the state's suitability as a location for the industries concerned.

The data extracted to give a general background on each SIC category were arranged in a similar pattern for each industry reviewed:

Table 1 shows the regional distribution of the industry, with the South Region broken down by state (as far as the information was readily available) to give some idea of the competition that would be faced by a Georgia location.

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1/ Published by the Georgia Department of Industry and Trade, Atlanta.

2/ The classification system developed by a technical committee headed by the federal Office of Management and Budget. The system operates in such a way that the definitions become progressively narrower with successive additions of numerical digits.

Table 2 gives data by size of establishment -- to show whether the average company in that industry tends to be large or small, and to enable comparisons to be made between such items as the costs of materials and the costs of labor.

Table 3 deals with the actual products of the industry, indicating the relative demand for specific types of goods.

Table 4 shows the growth trends in value of shipments of the products in recent years.

These four tables form the nucleus of background information on each of the 37 industries reviewed. Other tables were added where the data seemed of particular relevance.

One point should be emphasized. In interpreting the data, careful note should be made as to whether the figures refer to manufacturing establishments, or to a class of products. Manufacturers are classified according to which products form the major part of their output. An establishment may produce only the primary products of the industry in which it is classified, but such specialization for all the establishments in an industry would be extremely rare. General statistics (employment, payrolls, value added, shipments, etc.) shown for establishments in an industry reflect not only the primary activities of those establishments, but also any activities of a secondary nature. Tables 1 and 2 in each section of this study are compiled from such general statistics.

Product statistics (as given in Tables 3 and 4) represent the total output of specific products, whether they are produced by establishments classified in the same industry as the product, or produced as part of the secondary activities of establishments classified in other industries.

For some industries the Census of Manufactures publishes information on fuels and electric energy consumed, and on the use of water. Selected data on these utilities were extracted from the available information in the 1967 Census, and are included as Appendices B and C.

In all tables figures have been rounded, and details may not add to totals.

## SIC 2032 - CANNED SPECIALTIES

SIC Definition: Establishments primarily engaged in canning specialty products, such as baby foods, "native foods," health foods, and soups except seafood. Establishments primarily engaged in canning seafood soup are classified in Industry 2031, and those primarily engaged in quick freezing canned specialties in Industry 2037.

Materials include the various food ingredients, containers, and packing materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $1,078.1 million in production of canned specialties in 1967 (91% of all production of these goods), with secondary products and miscellaneous receipts totaling $283.8 million. Tables 3 and 4 list all production of canned specialties, including those produced as secondary products of other industries.

Prepared foods of all types are now taken for granted by the average shopper. Some products prepared in bulk by the manufacturer reach the consumer at a price cheaper than the cost of a similar dish made in small quantities in the home from original ingredients. This is not always the case, but people are obviously ready to pay a premium for savings in time and trouble. The extension of canned (and frozen) foods into special preparations, combining and modifying basic ingredients into acceptable "instant" dishes, can be expected to continue to expand as more and more "gourmet" recipes are adapted for mass production.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) confirm this continued growth, with production in 1969 estimated at $1,364.0 million compared with $1,190.7 million in 1967.

Table 1

LOCATION OF MANUFACTURERS* OF CANNED SPECIALTIES, 1967

| | Establishments | | Total Employees (000) | Value of Production ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 175 | 83 | 27.2 | 1,361.9 |
| Northeast Region | 50 | 24 | 10.4 | 539.8 |
| North Central Region | 38 | 23 | 8.4 | 422.0 |
| West Region | 47 | 12 | 3.8 | 190.1 |
| South Region | 40 | 24 | 4.6 | 210.0 |
| South Atlantic Division | 13 | 5 | 1.0 to 2.5 | (D) |
| Maryland | 3 | 3 | .5 to 1.0 | (D) |
| North Carolina | 4 | 2 | .25 to .5 | (D) |
| East South Central Division | 3 | 2 | 1.0 to 2.5 | (D) |
| Tennessee | 3 | 2 | 1.0 to 2.5 | (D) |
| West South Central Division | 24 | 17 | 2.6 | 132.4 |
| Arkansas | 2 | 2 | .5 to 1.0 | (D) |
| Texas | 19 | 12 | 1.9 | 92.8 |

* Manufacturers whose primary product is canned specialties.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 999 | 1,000 or More |
| Total Establishments | 175 | 92 | 38 | 30 | 8 | 7 |
| All Employees (000) | 27.2 | .5 | 1.8 | 6.8 | 5.0 | 13.0 |
| Payroll ($000,000) | 157.3 | 2.5 | 8.6 | 36.0 | 26.8 | 83.5 |
| Production Workers (000) | 22.4 | .4 | 1.6 | 5.6 | 4.2 | 10.6 |
| Man-Hours (000,000) | 45.0 | .7 | 3.2 | 11.5 | 8.6 | 20.9 |
| Wages ($000,000) | 115.1 | 1.6 | 6.4 | 25.8 | 19.3 | 62.0 |
| Value Added by Manufacture ($000,000) | 602.1 | 6.2 | 22.9 | 153.8 | 92.1 | 327.0 |
| Cost of Materials ($000,000) | 760.5 | 9.0 | 36.5 | 193.2 | 129.4 | 392.3 |
| Value of Production ($000,000) | 1,361.9 | 15.3 | 59.5 | 346.9 | 221.2 | 719.0 |
| Capital Expenditures, New ($000,000) | 28.1 | .5 | 1.0 | 5.7 | 6.3 | 14.7 |

* Manufacturers whose primary product is canned specialties.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

PRODUCTION OF CANNED SPECIALTIES, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 1,190.7 |
| Canned baby foods (except meat), total | 246.3 |
| Fruits | 47.9 |
| Vegetables | 35.3 |
| Desserts (including dessert-fruit combinations) | 50.4 |
| Juices | 19.7 |
| Other canned baby foods, except meat, cereal and biscuits, including vegetable and vegetable meat soups, etc. | 93.0 |
| Canned dry beans, total | 246.1 |
| Beans with pork, including baked | |
| 7.1 oz. to 10 oz. (8 oz. short, 8 oz. tall, etc.) | 12.1 |
| 10.1 oz. to 13 oz. (No. 1 picnic, etc.) | 6.1 |
| 13.1 oz. to 18 oz. (No. 300, No. 303, etc.) | 48.3 |
| 18.1 oz. to 27 oz. (No. 2, jumbo, etc.) | 28.0 |
| 27.1 oz. to 40 oz. (No. 2½, quart glass, etc.) | 31.3 |
| Other sizes | 16.7 |
| Beans with sauce, vegetarian style, including baked | |
| 13.1 oz. to 18 oz. (No. 300, No. 303, etc.) | 20.4 |
| Other sizes | 4.5 |
| Beans, all other dry varieties, including chili con carne | |
| 13.1 oz. to 18 oz. (No. 300, No. 303, etc.) | 41.3 |
| Other sizes | 30.0 |
| Other, not identified by type | 7.4 |
| Soups and other canned specialties and canned nationality foods (including spaghetti, macaroni, ravioli, mincemeat, Chinese foods, Spanish foods, etc.) | 698.3 |

* Includes production of establishments classified in other industries, shipping those products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF PRODUCTION OF CANNED SPECIALTIES, 1958, 1963 TO 1967
(in millions of dollars)

| | Total | Baby Foods (except meat) | Dry Beans | Soups, etc. |
|---|---|---|---|---|
| 1967 | 1,190.7 | 246.3 | 246.1 | 698.3 |
| 1966 | 1,165.9 | 237.5 | 255.9 | 672.5 |
| 1965 | 1,104.2 | 245.6 | 245.8 | 612.8 |
| 1964 | 996.7 | 232.3 | 216.2 | 548.3 |
| 1963 | 946.6 | 230.8 | 200.3 | 515.5 |
| 1958 | 827.6 | 185.2 | 166.9 | 475.5 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 2072 - CHOCOLATE AND COCOA PRODUCTS

SIC Definition: Establishments primarily engaged in shelling, roasting, and grinding cocoa beans for the purpose of making chocolate liquor, from which cocoa powder and cocoa butter are derived, and in the further manufacture of solid chocolate bars and chocolate coatings. Establishments primarily engaged in manufacturing products except candy from purchased chocolate and cocoa are classified in Industry 2099, and chocolate candies in Industry 2071.

Materials used include cocoa beans, sugar (cane and beet), nuts, containers, and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $497.9 million in shipments of chocolate and cocoa products in 1967 (75% of all shipments of these goods), with secondary products (mainly other confectionery) and miscellaneous receipts totaling $22.6 million. Tables 3 and 4 list all shipments of chocolate and cocoa products, including those produced as secondary products of other industries.

Manufacturers of chocolate and cocoa products are concentrated in the Northeast Region. Located in the Southern Region, however, are a number of manufacturers purchasing the chocolate and cocoa products for further processing, and a growing share of the population of the U. S. who are the ultimate consumers. Freight savings would seem a possibility for a Georgia factory shipping in cocoa beans and sugar through a southern port, with the final product distributed to the southern market. Georgia nuts would be readily available for inclusion in bar chocolate.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate a continued rise in output, with estimated shipments of $635.5 million in 1969 compared with the 1967 figure of $546.4 million.

Table 1

LOCATION OF MANUFACTURERS* OF CHOCOLATE AND COCOA PRODUCTS, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 34 | 23 | 8.4 | 520.5 |
| Northeast Region | 19 | 14 | 2.5 and over | (D) |
| North Central Region | 8 | 5 | .5 to 1.0 | (D) |
| West Region | 6 | 4 | .5 to 1.0 | (D) |
| South Region | 1 | - | N/A | N/A |

* Manufacturers whose primary product is chocolate and cocoa products.

(D) Withheld to avoid disclosing figures for individual companies.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 249 | 250 or More |
| Total Establishments | 34 | 11 | 10 | 7 | 6 |
| All Employees (000) | 8.4 | .1 | .5 | 1.3 | 6.4 |
| Payroll ($000,000) | 53.9 | .5 | 4.1 | 9.1 | 40.3 |
| Production Workers (000) | 6.6 | ** | .4 | 1.0 | 5.2 |
| Man-Hours (000,000) | 13.4 | .1 | 1.0 | 2.0 | 10.3 |
| Wages ($000,000) | 39.2 | .2 | 2.6 | 6.0 | 30.3 |
| Value Added by Manufacture ($000,000) | 196.2 | 1.0 | 10.6 | 30.5 | 154.0 |
| Cost of Materials ($000,000) | 330.3 | 2.8 | 46.5 | 71.6 | 209.5 |
| Value of Shipments ($000,000) | 520.5 | 3.9 | 56.7 | 99.4 | 360.7 |
| Capital Expenditures, New ($000,000) | 9.3 | *** | .9 | 4.5 | 3.9 |

* Manufacturers whose primary product is chocolate and cocoa products.

** Under 50.

*** Under $50,000.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF CHOCOLATE AND COCOA PRODUCTS, BY CLASS OF PRODUCT, 1967*
(in millions)

| | Quantity (pounds) | Value (dollars) |
|---|---|---|
| Total | 1,723.5 | 666.6 |
| Chocolate coatings | 443.6 | 137.8 |
| Sweet | 68.1 | 24.0 |
| Milk | 235.8 | 81.9 |
| Liquor | 18.9 | 6.6 |
| Confectionery (cocoa) coatings, including ice cream coatings (made chiefly from cocoa powder and fat other than cocoa butter) | 120.8 | 25.3 |
| Confectionery-type chocolate and cocoa products (solid bars and other molded confections), total | 499.2 | 273.1 |
| Made from purchased chocolate* | 118.5 | 68.0 |
| Made by chocolate manufacturers | 380.6 | 205.1 |
| Bar goods | | |
| Dark chocolate | 22.1 | 12.9 |
| Milk chocolate - plain | 108.3 | 59.5 |
| Milk chocolate - with nuts | 181.1 | 104.9 |
| Package goods | 113.3 | 62.3 |
| Other (bulk, etc.) | 60.7 | 27.7 |
| Molded confections, chocolate type (made from cocoa and fats other than cocoa butter) | 13.7 | 5.8 |
| Other chocolate and cocoa products | 748.3 | 245.0 |
| Made from purchased chocolate* | 172.2 | 52.2 |
| Made by chocolate manufacturers | 576.1 | 192.8 |
| Chocolate (except coatings) for baking, cooking, etc. | | |
| Unsweetened | 49.1 | 19.0 |
| Sweetened | 136.0 | 54.1 |
| Cocoa, powdered | | |
| Unsweetened | 126.4 | 31.6 |
| Sweetened or mixed with other substances | 192.2 | 76.0 |
| Cocoa butter | 25.3 | 15.6 |
| Chocolate sirups | | |
| Chocolate liquor base | 67.0 | 16.5 |
| Cocoa powder base | 123.7 | 22.8 |
| Chocolate and cocoa products, except confectionery type, not identified by type | 28.6 | 9.4 |
| Chocolate and cocoa products not identified by type | 32.5 | 10.7 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products. Also includes some products made from purchased chocolate (SIC 2071 and SIC 2099) identified in subtotals, but not separated in the detailed data.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF CHOCOLATE AND COCOA PRODUCTS, 1958, 1963 TO 1967
(in millions of dollars)

| | Total* | Chocolate Coatings | Confectionery Type* | Other* |
|---|---|---|---|---|
| 1967 | 546.4 | 137.8 | 205.1 | 203.5 |
| 1966 | 511.1 | 153.1 | 198.1 | 159.9 |
| 1965 | 486.8 | 138.1 | 187.5 | 161.2 |
| 1964 | 492.4 | 147.7 | 185.2 | 159.5 |
| 1963 | 480.6 | 139.6 | 179.9 | 161.1 |
| 1958 | 442.3 | 143.6 | 141.8 | 156.9 |

* Excludes products made from purchased chocolate.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 2098 - MACARONI, SPAGHETTI, VERMICELLI, AND NOODLES

SIC Definition: Establishments primarily engaged in manufacturing dry macaroni, spaghetti, vermicelli, and noodles. Establishments primarily engaged in manufacturing canned macaroni, spaghetti, etc., are classified in Industry 2032.[1/]

Materials include semolina and durum flour, farina and other wheat flour, containers, and packing material.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $244.8 million in shipments of macaroni, spaghetti, vermicelli, and noodles in 1967 (98% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $21.2 million. Tables 3 and 4 list all shipments of macaroni, spaghetti, vermicelli, and noodles, including those produced as secondary products of other industries.

Macaroni-making appears to be a business in which a small operator can be successful. Out of 205 companies in the U. S., 130 employ less than 20 workers -- and 75 companies have less than five workers. This import from Italy has long since been accepted nationwide, and there would appear to be possibilities for new operations in well-populated areas at present without any such facilities.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show substantial growth in total shipments, with an estimated total of $285.0 million compared with $248.3 million in 1967 (Table 4).

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1/ See page 3.

Table 1

LOCATION OF MANUFACTURERS* OF MACARONI AND SPAGHETTI, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 205 | 75 | 7.5 | 266.0 |
| Northeast Region | 72 | 27 | 3.4 | 124.3 |
| North Central Region | 51 | 25 | 2.2 | 81.0 |
| West Region | 61 | 14 | 1.3 | 42.6 |
| South Region | 21 | 9 | .7 | 18.1 |
| East South Central Division | 2 | 2 | .25 to .5 | (D) |
| Kentucky | 1 | 1 | less than .25 | (D) |
| West South Central Division | 12 | 6 | .25 to .5 | (D) |
| Louisiana | 6 | 4 | less than .25 | (D) |
| South Atlantic Division | 7 | 1 | N/A | N/A |

* Manufacturers whose primary product is macaroni, spaghetti, vermicelli, and noodles.

(D) Withheld to avoid disclosing figures for individual companies.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 249 | 250 to 499 |
| Total Establishments | 205 | 130 | 51 | 20 | 4 |
| All Employees (000) | 7.5 | .7 | 2.4 | 3.1 | 1.3 |
| Payroll ($000,000) | 43.2 | 2.9 | 13.0 | 18.2 | 9.0 |
| Production Workers (000) | 5.4 | .5 | 1.8 | 2.1 | .9 |
| Man-Hours (000,000) | 11.0 | 1.0 | 3.6 | 4.5 | 1.9 |
| Wages ($000,000) | 25.4 | 2.0 | 8.3 | 9.9 | 5.2 |
| Value Added by Manufacture ($000,000) | 119.7 | 6.6 | 39.1 | 48.4 | 25.7 |
| Cost of Materials ($000,000) | 148.6 | 9.3 | 46.4 | 61.0 | 31.8 |
| Value of Shipments ($000,000) | 266.0 | 16.0 | 85.1 | 108.4 | 56.5 |
| Capital Expenditures, New ($000,000) | 5.2 | .3 | 1.7 | 2.0 | 1.2 |

* Manufacturers whose primary product is macaroni, spaghetti, vermicelli, and noodles.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

VALUE OF SHIPMENTS OF MACARONI AND SPAGHETTI, BY CLASS OF PRODUCT, 1967*
(in millions)

| | Quantity (pounds) | Value (dollars) |
|---|---|---|
| Total | 1,245.4 | 248.3 |
| Macaroni, spaghetti, vermicelli, and other macaroni products of all shapes, sizes, and types, except canned | 1,034.6 | 198.1 |
| Noodle products of all shapes, sizes, and types, except canned | 126.8 | 33.4 |
| Other, not classified by type | 84.0 | 16.8 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF MACARONI AND SPAGHETTI, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 248.3 |
| 1966 | 224.6 |
| 1965 | 222.3 |
| 1964 | 233.1 |
| 1963 | 215.9 |
| 1958 | 165.3 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 2292 - LACE GOODS

SIC Definition: Establishments primarily engaged in manufacturing lace machine products, and those primarily engaged in dyeing and finishing lace goods. Establishments primarily engaged in manufacturing Schiffli machine embroideries are classified in Industry 2397. Establishments primarily engaged in manufacturing knitted lace and netting are classified in Industry 2256.

Materials include cotton yarns; man-made fiber yarns (rayon, acetate, nylon, etc.); containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $52.6 million in shipments of lace goods in 1967 (94% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $13.1 million. Tables 3 and 4 list all shipments of lace goods, including those produced as secondary products of other industries.

Although there is a continuing market for lace in the making of lingerie, the demand for other lace products fluctuates with fashion trends. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate a current resurgence of interest in lace, with estimated shipments of $64.6 million, compared with $55.8 million in 1967.

The industry is concentrated in the Northeast, particularly in Rhode Island and New York. Representation in the South has increased gradually, however, with the number of establishments with 20 or more employees rising from five to eight between 1963 and 1967. The growth of the apparel industry in Georgia could mean a local market for lace goods, but in view of the cyclical nature of the demand, it would seem wise for any lace-making operation in the state to be combined with the manufacture of goods for which there is a steady market.

Table 1

LOCATION OF MANUFACTURERS* OF LACE GOODS, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 142 | 48 | 5.0 | 65.7 |
| Northeast Region | 130 | 40 | 2.5 and over | (D) |
| South Region | 11 | 8 | .5 | 5.5 |
| South Atlantic Division | 5 | 4 | .3 | 3.1 |
| North Carolina | 5 | 4 | .3 | 3.1 |
| East South Central Division | 6 | 4 | .2 | 2.5 |

* Manufacturers whose primary product is lace goods.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 20 | 20 to 99 | 100 to 249 | 250 to 499 |
| Total Establishments | 142 | 94 | 36 | 7 | 5 |
| All Employees (000) | 5.0 | .5 | 1.7 | 1.3 | 1.5 |
| Payroll ($000,000) | 23.7 | 3.0 | 7.9 | 6.2 | 6.7 |
| Production Workers (000) | 4.4 | .5 | 1.6 | 1.2 | 1.2 |
| Man-Hours (000,000) | 8.4 | 1.0 | 2.9 | 2.3 | 2.1 |
| Wages ($000,000) | 19.5 | 2.6 | 6.7 | 5.5 | 4.8 |
| Value Added by Manufacture ($000,000) | 36.6 | 5.7 | 10.9 | 9.4 | 10.7 |
| Cost of Materials ($000,000) | 28.0 | 5.9 | 8.3 | 6.3 | 7.4 |
| Value of Shipments ($000,000) | 65.7 | 11.7 | 19.3 | 16.1 | 18.8 |
| Capital Expenditures, New ($000,000) | 2.0 | .2 | 1.0 | .1 | .7 |

* Manufacturers whose primary product is lace goods.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF LACE GOODS, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 55.8 |
| Leavers lace machine products | |
| All-overs | 22.5 |
| Edgings, insertions, galloons, flouncings, and all other leavers products | 12.0 |
| Nottingham lace machine products, including curtains, and other laces and nets, including bobbinets and Barmen laces | 10.7 |
| Lace goods, not classified by type | 10.6 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF LACE GOODS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 55.8 |
| 1966 | 41.0 |
| 1965 | 45.9 |
| 1964 | 54.5 |
| 1963 | 49.4 |
| 1958 | 55.0 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 2386 - LEATHER AND SHEEP-LINED CLOTHING

SIC Definition: Establishments primarily engaged in manufacturing leather and sheep-lined garments. Establishments primarily engaged in manufacturing leather gloves and mittens are classified in Industry 3151, and fur garments in Industry 2371.

Materials include finished leather; broadwoven fabrics (piece goods), including linings; knitted fabrics (cotton, wool, manmade fibers, etc.); dressed furs (including dyed and blended furs); containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $87.6 million in shipments of leather and sheep-lined clothing in 1967 (86% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $11.2 million. Tables 3 and 4 list all shipments of leather and sheep-lined clothing, including those produced as secondary products of other industries.

Three-quarters of the companies in this industry are in the Northeast Region, with the heaviest concentration in New York. The expansion of the apparel industry in Georgia, however, has now covered every classification (four-digit Standard Industrial Classification system) except this one, and there appears to be no good reason why Georgia should not manufacture leather garments for the southern winter market.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate that the overall U. S. market is growing, with estimated shipments of $135.4 million -- a 33% increase over the 1967 shipments of $102.1 million.

Table 1

LOCATION OF MANUFACTURERS* OF LEATHER AND SHEEP-LINED CLOTHING, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 139 | 71 | 5.1 | 98.8 |
| Northeast Region | 104 | 59 | 3.8 | 79.6 |
| North Central Region | 14 | 7 | .7 | 10.9 |
| West Region | 14 | 2 | .2 | 3.4 |
| South Region | 7 | 3 | .4 | 4.9 |
| South Atlantic Division | 2 | 1 | less than .25 | (D) |
| Florida | 1 | 1 | less than .25 | (D) |

* Manufacturers whose primary product is leather and sheep-lined clothing.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | |
|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 |
| Total Establishments | 139 | 68 | 61 | 10 |
| All Employees (000) | 5.1 | .4 | 2.9 | 1.8 |
| Payroll ($000,000) | 23.9 | 2.5 | 13.7 | 7.7 |
| Production Workers (000) | 4.6 | .4 | 2.6 | 1.6 |
| Man-Hours (000,000) | 8.3 | .7 | 4.8 | 2.8 |
| Wages ($000,000) | 18.7 | 1.7 | 11.2 | 5.7 |
| Value Added by Manufacture ($000,000) | 43.4 | 5.6 | 22.2 | 15.6 |
| Cost of Materials ($000,000) | 55.1 | 14.1 | 23.3 | 17.7 |
| Value of Shipments ($000,000) | 98.8 | 19.6 | 45.4 | 33.7 |
| Capital Expenditures, New ($000,000) | .5 | .1 | .3 | .1 |

* Manufacturers whose primary product is leather and sheep-lined clothing.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF LEATHER AND SHEEP-LINED CLOTHING, BY CLASS OF PRODUCT, 1967*

| | Quantity (000 dozen) | Value ($000,000) |
|---|---|---|
| Total | (X) | 102.1 |
| Leather coats and jackets | | |
| Men's and boys' | 94 | 27.7 |
| Women's, misses', and juniors' | 191 | 58.3 |
| All other leather and sheep-lined clothing, including children's | (X) | 1.6 |
| Other leather and sheep-lined clothing, not classified by type | (X) | 14.5 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF LEATHER AND SHEEP-LINED CLOTHING, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 102.1 |
| 1966 | 92.7 |
| 1965 | 80.3 |
| 1964 | 64.5 |
| 1963 | 58.4 |
| 1958 | 62.7 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 2445 - COOPERAGE

SIC Definition: Establishments primarily engaged in manufacturing barrels, tubs, hogsheads, and other containers made of staves, except fruit and vegetable baskets (Industry 2443). Establishments primarily engaged in manufacturing tobacco hogshead stock are classified in Industry 2421, and those manufacturing cooperage stock in Industry 2429.

Materials include wood staves, heading, and hoops -- sawed or split.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $76.3 million in shipments of cooperage in 1967 (98% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $2.6 million. Tables 3 and 4 list all shipments of cooperage, including cooperage produced as secondary products of other manufacturing industries.

Companies in this industry are usually small -- nearly half the cooperage establishments in the U. S. have less than five employees each, and only two operations employ over 250 workers. The production of whiskey barrels accounts for the greatest dollar volume in shipments -- but coopers in this line will obviously continue to locate in whiskey-making areas.

Shipments of other types of cooperage increased between the two censuses of 1963 and 1967, though the growth was not as substantial as that of the whiskey containers. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) estimate total cooperage shipments at $72.6 million in 1969, down from $77.9 million in 1967. No breakdown of this figure is given, however, so it cannot yet be ascertained which segments of the industry were affected in this decline.

Table 1

LOCATION OF MANUFACTURERS* OF COOPERAGE, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 91 | 20 | 2.7 | 78.8 |
| Northeast Region | 33 | 5 | .3 | 7.2 |
| North Central Region | 25 | 3 | .6 | 15.1 |
| West Region | 7 | 2 | .1 | 1.4 |
| South Region | 26 | 10 | 1.7 | 55.1 |
| South Atlantic Division | 12 | 3 | less than .25 | (D) |
| Maryland | 6 | 2 | .2 | 2.6 |
| East South Central Division | 11 | 6 | 1.3 | 49.5 |
| Kentucky | 7 | 5 | .5 to 1.0 | (D) |
| Tennessee | 3 | 1 | .25 to .5 | (D) |
| West South Central Division | 3 | 1 | less than .25 | (D) |
| Arkansas | 3 | 1 | less than .25 | (D) |

* Manufacturers whose primary product is cooperage.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | |
|---|---|---|---|---|
| | | Under 20 | 20 to 99 | 100 to 499 |
| Total Establishments | 91 | 71 | 11 | 9 |
| All Employees (000) | 2.7 | .4 | .5 | 1.9 |
| Payroll ($000,000) | 15.5 | 1.7 | 2.2 | 11.7 |
| Production Workers (000) | 2.4 | .4 | .4 | 1.7 |
| Man-Hours (000,000) | 4.7 | .6 | .8 | 3.3 |
| Wages ($000,000) | 13.0 | 1.4 | 1.8 | 9.8 |
| Value Added by Manufacture ($000,000) | 26.1 | 3.5 | 2.6 | 20.0 |
| Cost of Materials ($000,000) | 51.4 | 5.8 | 10.5 | 35.1 |
| Value of Shipments ($000,000) | 78.8 | 9.3 | 13.2 | 56.5 |
| Capital Expenditures, New ($000,000) | 1.7 | .1 | .1 | 1.6 |

* Manufacturers whose primary product is cooperage.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF COOPERAGE, BY CLASS OF PRODUCT, 1967*

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Total | (X) | 77.9 |
| Slack cooperage (hogsheads, barrels, and kegs, including recoopered used slack barrels and kegs) | 4,452 | 7.0 |
| Tight cooperage, hogsheads, barrels, and kegs for bourbon and other whiskey | | |
| New | 2,556 | 59.6 |
| Recoopered used | | |
| Other tight cooperage, including recoopered used tight barrels, kegs, etc. | N/A | 6.1 |
| Cooperage, not classified by type | (X) | 5.2 |

* Includes shipments by establishments in other industries and shipping these products as "secondary" products.

(X) Not applicable.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF COOPERAGE, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 77.9 |
| 1966 | 63.5 |
| 1965 | 61.6 |
| 1964 | 53.9 |
| 1963 | 49.5 |
| 1958 | 67.5 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 2644 - WALLPAPER

SIC Definition: Establishments primarily engaged in designing, printing, and embossing paper for interior walls and ceilings.

Materials include paper stock called "hanging paper" (produced by paper mills classified in Industry 2621); paperboard; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $46.1 million in shipments of wallpaper in 1967 (99% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $2.5 million. Tables 3 and 4 list all shipments of wallpaper, including that produced as a secondary product of other industries (chiefly manufacturers of coated and glazed paper).

The demand for wallpaper is affected not only by economic conditions, but also by fashion trends in wall coverings. After considerable fluctuation in the past few decades, shipment figures for recent years show a comparatively steady uptrend (Table 4). Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show a further increase, with estimated shipments of $56.4 million compared with $46.2 million in 1967.

Wallpaper manufacturers appear to concentrate on production of this one item, with only limited output of secondary products. In view of the market fluctuations, it would seem advisable for any new manufacturer to have a strong second line of production.

Table 1

LOCATION OF MANUFACTURERS* OF WALLPAPER, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 77 | 31 | 2.3 | 48.6 |
| Northeast Region | 53 | 20 | 1.4 | 33.0 |
| North Central Region | 13 | 9 | .7 | 11.1 |
| West Region | 9 | 2 | less than .25 | (D) |
| South Region | 2 | - | less than .04 | (D) |

* Manufacturers whose primary product is wallpaper.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | |
|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 249 |
| Total Establishments | 77 | 46 | 25 | 6 |
| All Employees (000) | 2.3 | .3 | 1.1 | .9 |
| Payroll ($000,000) | 14.6 | 1.7 | 6.8 | 6.0 |
| Production Workers (000) | 1.8 | .3 | .9 | .7 |
| Man-Hours (000,000) | 3.6 | .5 | 1.7 | 1.5 |
| Wages ($000,000) | 9.9 | 1.3 | 4.5 | 4.1 |
| Value Added by Manufacture ($000,000) | 27.0 | 3.2 | 12.0 | 11.8 |
| Cost of Materials ($000,000) | 22.4 | 2.1 | 10.0 | 10.3 |
| Value of Shipments ($000,000) | 48.6 | 5.5 | 21.9 | 21.4 |
| Capital Expenditures, New ($000,000) | .5 | .1 | .3 | .2 |

* Manufacturers whose primary product is wallpaper.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF WALLPAPER, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 46.2 |
| Machine printed: 35,500 short tons of paper and board consumed, and 60.1 million single rolls (or equivalent) of shipments and transfers | 32.3 |
| Screen printed wallpaper, including repeat goods, scenics, panels, etc: 2.3 million single rolls (equivalent 36 square feet) of shipments and transfers | 8.7 |
| Other wallpaper, not classified by type | 5.2 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF WALLPAPER, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 46.2 |
| 1966 | 44.8 |
| 1965 | 40.3 |
| 1964 | 36.5 |
| 1963 | 33.6 |
| 1958 | 35.6 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 2822 - SYNTHETIC RUBBER (VULCANIZABLE ELASTOMERS)

SIC Definition: Establishments primarily engaged in manufacturing synthetic rubber by polymerization or copolymerization. An elastomer for the purpose of this classification is a rubber-like material capable of vulcanization, such as copolymers of butadiene and styrene, or butadiene and acrylonitrile, polybutadines, chloroprene rubbers, and isobutylene-isoprene copolymers. Butadiene copolymers containing less than 50% butadiene are classified in Industry 2821. Chlorinated rubber and cyclized rubbers are considered as semifinished products and are classified in Industry 3069.

Materials used include butadiene; styrene; acrylonitrile; carbon black; extender oils of petroleum origin; rubber processing chemicals (accelerators, antioxidants, blowing agents, inhibitors, peptizers, etc.); soap and detergents; sodium hydroxide; sulfuric acid; paper and paperboard containers.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $814.4 million in shipments of synthetic rubber in 1967 (81% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $112.6 million. Data in Tables 3 and 4 include synthetic rubber produced as a secondary product of other industries.

The major end use for synthetic, natural, or reclaimed rubber is in the production of tires and tire products. (See Table 3.) The growing market for these and other rubber products will increase the demand for synthetic rubber, which accounted for over 70% of all rubber consumption in 1969, up from 55% in 1958. (See Table 3 under Reclaimed Rubber, SIC 3031, for trends in consumption by type of rubber.) Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) confirm the continued growth in synthetic rubber production, with shipments in 1969 at an estimated value of $1,157.9 million compared with $1,004.9 million in 1967.

Most of the synthetic rubber produced in this country is made by divisions or subsidiaries of the major rubber product manufacturers or by oil or chemical companies. Hence, synthetic rubber production is in general linked either to companies producing one or more of the basic constituents, or to companies turning the rubber into marketable items. The success of any Georgia factory probably would depend on a similar link with an established company.

Table 1

LOCATION OF MANUFACTURERS* OF SYNTHETIC RUBBER, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 48 | 28 | 12.6 | 926.9 |
| Northeast Region | 7 | 2 | .5 to 1.0 | (D) |
| North Central Region | 9 | 4 | 1.0 to 2.5 | (D) |
| West Region | 4 | 2 | .5 to 1.0 | (D) |
| South Region | 28 | 20 | 10.1 | 757.4 |
| East South Central Division | 4 | 3 | 2.5 and over | (D) |
| Kentucky | 2 | 2 | 2.5 and over | (D) |
| West South Central Division | 19 | 14 | 6.6 | 536.3 |
| Louisiana | 6 | 4 | 1.0 to 2.5 | (D) |
| Texas | 12 | 10 | 5.1 | 407.8 |
| South Atlantic Division | 5 | 3 | .5 to 1.0 | (D) |
| Delaware | 1 | 1 | less than .25 | (D) |
| West Virginia | 2 | 2 | .25 to .5 | (D) |

* Manufacturers whose primary product is synthetic rubber.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
| Total Establishments | 48 | 20 | 4 | 14 | 10 |
| All Employees (000) | 12.6 | .1 | .2 | 3.9 | 8.5 |
| Payroll ($000,000) | 110.4 | .9 | 1.3 | 32.9 | 75.2 |
| Production Workers (000) | 8.5 | .1 | .2 | 2.3 | 6.0 |
| Man-Hours (000,000) | 16.8 | .1 | .2 | 4.8 | 11.7 |
| Wages ($000,000) | 66.5 | .5 | .9 | 18.0 | 47.1 |
| Value Added by Manufacture ($000,000) | 404.9 | 2.7 | 4.3 | 139.5 | 258.5 |
| Cost of Materials ($000,000) | 521.2 | 3.1 | 7.2 | 164.4 | 346.3 |
| Value of Shipments ($000,000) | 926.9 | 5.7 | 12.4 | 301.2 | 607.6 |
| Capital Expenditures, New ($000,000) | 75.2 | 20.0 | .1 | 10.3 | 44.8 |

* Manufacturers whose primary product is synthetic rubber.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

CONSUMPTION OF SYNTHETIC, NATURAL, AND RECLAIMED RUBBER, 1969
(long tons)

| | All Products | Tires & Tire Products | Wire & Cable Products | Other Products |
|---|---|---|---|---|
| Synthetic, natural, and reclaimed rubber, total | 2,854,103 | 1,859,225 | 31,889 | 962,989 |
| Synthetic and natural, total | 2,622,333 | 1,721,544 | 31,779 | 869,010 |
| Synthetic | 2,024,061 | 1,292,755 | 30,488 | 700,818 |
| S-type* | 1,310,068 | 893,235 | 11,394 | 405,439 |
| Butyl | 94,422 | 69,172 | 1,496 | 23,754 |
| N-type | 67,934 | 158 | 545 | 67,231 |
| Stereo elastomers* | 393,762 | 324,600 | 720 | 68,442 |
| Other elastomers* (excludes polyurethane rubbers) | 157,875 | 5,590 | 16,333 | 135,952 |
| Natural | 598,272 | 428,789 | 1,291 | 168,192 |
| Reclaimed rubber | 231,770 | 137,681 | 110 | 93,979 |

* Includes oil content of S-type rubber, stereo elastomers, and other elastomers.

Source: U. S. Bureau of the Census, Current Industrial Reports, Series M30A (69)-13.

Table 4

VALUE OF SHIPMENTS OF SYNTHETIC RUBBER, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 1,004.9 |
| 1966 | 1,038.1 |
| 1965 | 949.9 |
| 1964 | 919.9 |
| 1963 | 862.3 |
| 1958 | 603.9 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3031 - RECLAIMED RUBBER

SIC Definition: Establishments primarily engaged in reclaiming rubber from scrap rubber tires, tubes, and miscellaneous waste rubber articles by processes which result in a devulcanized, depolymerized or regenerated replasticized product containing added ingredients. This product is sold for use as a raw material in the manufacture of rubber goods with or without admixture with crude rubber or artificial rubber. Establishments primarily engaged in the assembly and wholesale sale of scrap rubber are classified in trade industries.

Materials used include all types of scrap rubber; pine tar; plasticizers; asphaltic; sweller; peptizers; mineral filler.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $35.4 million in shipments of reclaimed rubber in 1967 (75% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $8.4 million. Data in Table 3 include reclaimed rubber produced as a secondary product of other industries, and Table 4 compares the consumption of all reclaimed rubber with that of natural and synthetic rubber. (See Table 3 under Synthetic Rubber, SIC 2822, for the tonnage of the types of rubber going into different products.)

One of the major problems in the reclaiming of rubber is the availability of an adequate and assured supply of scrap rubber. Millions of tires and tubes are made each year, and they all eventually become scrap, along with lesser quantities of other discarded rubber items. The disposal of these mountains of tires has become part of the much-discussed pollution question. Burning the tires adds to air pollution; backyard swings and boat bumpers use only a fraction of the supply. Big stacks have been dumped in the sea to help to prevent shore erosion and to act as fish havens; chopped up, they are now being added to blacktop dressing for driveways and parking lots.

The obvious solution would appear to be that of reclaiming the rubber. The processes used are complex, but they do not constitute the main difficulty. Old tires are scattered throughout the countryside, in service stations, new tire outlets, junk yards, garbage dumps, etc., and to collect them for shipping to the processing facilities, and to keep the supply flowing, at a cost that would enable the final product to be competitive with new rubber, is a problem of major dimensions.

The lack of growth in the tonnage consumption of reclaimed rubber (Table 4) as compared with the increase in synthetic rubber emphasizes the difficulties faced by the industry. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) give dollar figures confirming this situation, with estimated shipments of $46.5 million in 1969 compared with $47.3 million in 1967. The development of this industry in Georgia would depend on answers to this problem -- possibly tied in with river and canal expansion permitting relatively cheap barge shipment of tires from major pickup points.

Table 1

LOCATION OF MANUFACTURERS* OF RECLAIMED RUBBER, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 24 | 13 | 1.7 | 43.8 |
| North Central Region | 11 | 6 | 1.2 | 31.1 |
| Northeast and West Regions | 9 | 5 | less than .25 | (D) |
| South Region | 4 | 2 | .25 to .5 | (D) |
| East South Central Division | 3 | 2 | .25 to .5 | (D) |
| Tennessee | 2 | 1 | less than .25 | (D) |

* Manufacturers whose primary product is reclaimed rubber.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | |
|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 |
| Total Establishments | 24 | 11 | 6 | 7 |
| All Employees (000) | 1.7 | ** | .2 | 1.4 |
| Payroll ($000,000) | 11.8 | .5 | 1.4 | 10.0 |
| Production Workers (000) | 1.4 | ** | .2 | 1.1 |
| Man-Hours (000,000) | 2.5 | .2 | .4 | 2.0 |
| Wages ($000,000) | 8.9 | .3 | 1.1 | 7.5 |
| Value Added by Manufacture ($000,000) | 23.4 | 1.0 | 3.3 | 19.1 |
| Cost of Materials ($000,000) | 19.6 | .8 | 2.1 | 16.8 |
| Value of Shipments ($000,000) | 43.8 | 1.9 | 5.6 | 36.3 |
| Capital Expenditures, New ($000,000) | 1.6 | .1 | .1 | 1.3 |

* Manufacturers whose primary product is reclaimed rubber.

** Under 50.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

VALUE OF SHIPMENTS OF RECLAIMED RUBBER, 1958, 1963 TO 1967*
(in millions of dollars)

| | |
|---|---|
| 1967 | 47.3 |
| 1966 | 53.8 |
| 1965 | 55.5 |
| 1964 | 53.6 |
| 1963 | 55.2 |
| 1958 | 47.6 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

RUBBER CONSUMPTION BY TYPE, 1958 TO 1969
(long tons)

| | Total | Synthetic | Natural | Reclaimed |
|---|---|---|---|---|
| 1969 | 2,854,103 | 2,024,061 | 598,272 | 231,770 |
| 1968 | 2,728,490 | 1,896,200 | 581,864 | 250,426 |
| 1967 | 2,356,377 | 1,628,258 | 488,848 | 239,271 |
| 1966 | 2,476,241 | 1,666,057 | 545,678 | 264,506 |
| 1965 | 2,324,362 | 1,540,114 | 514,706 | 269,542 |
| 1964 | 2,196,207 | 1,451,513 | 481,500 | 263,194 |
| 1963 | 2,027,682 | 1,306,786 | 457,228 | 263,668 |
| 1962 | 1,982,114 | 1,255,936 | 462,759 | 263,419 |
| 1961 | 1,779,787 | 1,102,171 | 427,341 | 250,285 |
| 1960 | 1,834,808 | 1,079,245 | 479,048 | 276,515 |
| 1959 | 1,918,180 | 1,072,726 | 555,044 | 290,410 |
| 1958 | 1,612,560 | 879,912 | 484,492 | 248,156 |

Source: Bureau of the Census, Current Industrial Reports, Series M30A.

## SIC 3131 - BOOT AND SHOE CUT STOCK AND FINDINGS

SIC Definition: Establishments primarily engaged in manufacturing leather soles, inner soles, and other boot and shoe cut stock and findings. This industry also includes finished wood heels. Establishments primarily engaged in manufacturing heels, soling strips, and soles made of rubber, composition, plastics, and fiber are classified in Major Group 30.

Materials include hides, skins, and pelts; tanning materials, dressings, dyes, and other finishing agents; plywood; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $235.3 million in shipments of boot and shoe cut stock and findings in 1967 (93% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $27.5 million. Tables 3 and 4 list all shipments of boot and shoe cut stock and findings, including those produced as secondary products of other industries.

One of the problems in the boot and shoe industry is the large number of combinations of different sizes, widths, and styles of footwear. Only major manufacturers of boots and shoes can operate their own plants to supply cut stock and findings in all the varied shapes and sizes. (Some 15% of 1967 shipments were transfers to other plants of the same company.) The needs of smaller companies, however, can be combined to give an independent cut stock operation an adequate run of any one size and width. In 1967 Georgia had nine shoe and three slipper factories. Some of the smaller operations might well support a cut stock and findings plant in the state.

Competition from low-wage shoe producers abroad is severe, and shipments of cut stock and findings decreased in the early sixties. Increased automation in the U. S. footwear industry has raised productivity, however, and shipments of cut stock have risen each year since 1964. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show a continuation of this trend, with estimated shipments of $264.4 million compared with $254.3 million in 1967.

The problem of foreign competition has not been overcome, however, and even greater automation will be needed. An important step will be the standardization of all last shapes and measurements -- one of the industry's current objectives.

Table 1

LOCATION OF MANUFACTURERS* OF BOOT AND SHOE CUT STOCK AND FINDINGS, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 379 | 189 | 13.7 | 262.8 |
| Northeast Region | 293 | 146 | 9.7 | 182.5 |
| North Central Region | 63 | 32 | 3.0 | 61.0 |
| West Region | 8 | 3 | .2 | 2.4 |
| South Region | 15 | 8 | .9 | 17.0 |
| East South Central Division | 7 | 5 | .5 to 1.0 | (D) |
| Tennessee | 5 | 5 | .6 | 11.9 |
| West South Central Division | 2 | - | less than .25 | (D) |
| South Atlantic Division | 6 | 3 | less than .25 | (D) |

* Manufacturers whose primary product is boot and shoe cut stock and findings.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 20 | 20 to 49 | 50 to 99 | 100 to 499 |
| Total Establishments | 379 | 190 | 95 | 56 | 38 |
| All Employees (000) | 13.7 | 1.3 | 3.1 | 3.9 | 5.5 |
| Payroll ($000,000) | 59.9 | 5.8 | 13.4 | 16.8 | 24.0 |
| Production Workers (000) | 12.2 | 1.2 | 2.7 | 3.4 | 5.0 |
| Man-Hours (000,000) | 22.7 | 2.1 | 4.9 | 6.2 | 9.5 |
| Wages ($000,000) | 45.8 | 4.3 | 10.1 | 12.6 | 18.8 |
| Value Added by Manufacture ($000,000) | 109.2 | 10.8 | 23.9 | 30.6 | 43.9 |
| Cost of Materials ($000,000) | 153.5 | 14.4 | 39.4 | 39.8 | 59.9 |
| Value of Shipments ($000,000) | 262.8 | 25.5 | 63.2 | 70.0 | 104.1 |
| Capital Expenditures, New ($000,000) | 2.7 | .1 | .5 | 1.0 | 1.1 |

* Manufacturers whose primary product is boot and shoe cut stock and findings.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF BOOT AND SHOE CUT STOCK AND FINDINGS, BY CLASS OF PRODUCT, 1967*

| | Quantity (000,000 dozen pairs) | Value ($000,000) |
|---|---|---|
| Total | (X) | 254.3 |
| Boot and shoe cut stock | | |
| Outer soles, all materials except rubber, elastomer resin, and plastic | 6.9 | 45.0 |
| Inner soles | | |
| Leather | N/A | 18.3 |
| Other | N/A | 17.1 |
| Heels | | |
| Leather | N/A | 5.6 |
| Other, except wood, rubber, elastomer resin, and plastic | 4.7 | 9.3 |
| Counters | 20.7 | 13.4 |
| Box toes | 15.4 | 4.6 |
| Caps | .9 | 4.7 |
| Other cut stock | | |
| Leather | (X) | 7.6 |
| Other | (X) | 16.1 |
| Findings, boot and shoe | | |
| Wood heel blocks, made for sale as such | 1.4 | 2.1 |
| Finished wood heels | | |
| Manufactured complete in your plant | 2.7 | 8.1 |
| Finished from purchased blocks | 3.5 | 14.8 |
| Shanks | N/A | 6.3 |
| Welting (equivalent ½ inch wide) | 122.6** | 14.6 |
| Other findings | (X) | 35.0 |
| Other boot and shoe cut stock and findings, not classified by type | (X) | 31.7 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

** Million linear yards.

(X) Not applicable.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF BOOT AND SHOE CUT STOCK AND FINDINGS,
1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 254.3 |
| 1966 | 248.1 |
| 1965 | 227.7 |
| 1964 | 205.0 |
| 1963 | 216.0 |
| 1958 | 239.0 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3211 - FLAT GLASS

SIC Definition: Establishments primarily engaged in manufacturing flat glass. This industry also produces laminated glass, but establishments primarily engaged in manufacturing laminated glass from purchased flat glass are classified in Industry 3231 (Glass Products Made of Purchased Glass).

Materials include glass sand, sodium carbonate (soda ash), sodium sulfate (including salt cake), cullet (glass scrap), clay and nonclay refractories, and packing materials.

General Data. The construction industry is one of the major users of flat glass, and while this implies a steady basic demand, glass producers can be affected severely by any prolonged slowdown in building, such as occurred in 1969 and 1970. Continued growth of the population, however, means that much of the demand is delayed rather than lost under such circumstances. Competition from imported window glass is an additional problem. Labor costs in the U. S., despite heavy automation, are higher than those of the foreign glass producers, and in 1968 imported window glass captured 32% of the U. S. market. This proportion was down to an estimated 23% in 1970, but U. S. producers complained that most of the glass for mobile homes was imported.[1/]

The "float" glass process was developed in England by Pilkington Bros., Ltd. Molten glass floats on molten tin under controlled temperatures. Since glass turns solid at a much higher temperature than tin, it can be taken from the still-liquid tin in a continuous sheet, with a clearness and lack of distortion comparable to plate glass -- but without the need for grinding and polishing required in the making of plate glass. This process is used in the U. S. under license, and is gradually taking over the plate-glass market. Since this market includes automobile glass, the cheaper "float" process is of major importance. The minimum thickness of float glass is 1/8 inch, and the major glass producers are endeavoring to make thinner glass of equal quality and competitive price -- both to avoid the heavy license fees for the float process and to capture a larger share of the auto glass market.

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1/ Business Week, April 17, 1971.

If the glass sand in Georgia is of a quality suitable for flat glass the generally lower labor costs of the area compared with more northerly states could make it an attractive location for a new plant, which would be in a position to supply the growing mobile home industry of the South as well as the auto assembly plants of the region.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show continued growth in the production of flat glass, with total shipments in 1969 estimated at $1,029.0 million compared with $810.9 million in 1967.

Table 1

LOCATION OF MANUFACTURERS* OF FLAT GLASS, 1967

| | Establishments | | Total Employees (000) |
|---|---|---|---|
| | Total | With 20 Employees or More | |
| United States | 64 | 39 | 23.9 |
| Northeast Region | 11 | 6 | 2.5 and over |
| North Central Region | 22 | 12 | 8.5 |
| West Region | 11 | 5 | 1.0 to 2.5 |
| South Region | 20 | 16 | 9.6 |
| South Atlantic Division | 9 | 8 | 3.8 |
| Maryland | 1 | 1 | 1.0 to 2.5 |
| West Virginia | 6 | 6 | 2.5 and over |
| East South Central Divison | 3 | 3 | 2.5 and over |
| Tennessee | 3 | 3 | 2.5 and over |
| West South Central Division | 8 | 5 | 1.0 to 2.5 |
| Arkansas | 2 | 1 | .25 to .5 |
| Louisiana | 2 | 1 | .5 to 1.0 |
| Oklahoma | 3 | 2 | 1.0 to 2.5 |

* Manufacturers whose primary product is flat glass.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | Total | Under 50 | 50 to 249 | 250 to 499 | 500 to 999 | 1,000 or More |
| Total Establishments | 64 | 31 | 8 | 7 | 9 | 9 |
| All Employees (000) | 23.9 | .4 | .7 | 2.5 | 6.2 | 14.1 |
| Payroll ($000,000) | 196.6 | 2.8 | 5.0 | 18.2 | 50.9 | 119.8 |
| Production Workers (000) | 19.8 | .3 | .6 | 2.0 | 5.3 | 11.6 |
| Man-Hours (000,000) | 40.2 | .7 | 1.2 | 4.1 | 10.9 | 23.3 |
| Wages ($000,000) | 157.6 | 2.0 | 3.3 | 13.8 | 43.3 | 95.2 |
| Value Added by Manufacture ($000,000) | 422.9 | 6.3 | 8.9 | 37.6 | 95.6 | 274.4 |
| Cost of Materials ($000,000) | 194.7 | 3.8 | 6.8 | 13.2 | 41.3 | 129.5 |
| Value of Shipments ($000,000) | 611.3 | 9.9 | 15.2 | 48.7 | 138.3 | 399.1 |
| Capital Expenditures, New ($000,000) | 59.9 | 11.1 | .7 | 5.0 | 9.9 | 33.1 |

* Manufacturers whose primary product is flat glass.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF FLAT GLASS, BY CLASS OF PRODUCT, 1967*

| | Quantity** (000,000 square feet) | Value ($000,000) |
|---|---|---|
| Total | (X) | 810.9 |
| Sheet (window) glass** | (X) | 133.2 |
| Single strength (uncolored) | 9.8 | 56.7 |
| Double strength (uncolored), including greenhouse | 4.1 | 26.8 |
| Heavy sheet (uncolored) | 6.0 | 37.0 |
| Other | (X) | 12.7 |
| Plate and float glass | (X) | 183.3 |
| Other flat glass, made from glass produced in the same establishment | (X) | 130.2 |
| Rolled and wire glass | (X) | 22.0 |
| Tempered glass | 166.9 | 102.6 |
| Other flat glass | 19.1 | 5.6 |
| Laminated glass (including products of purchased glass industry, SIC 3231, combined to avoid disclosing figures of individual companies) | 210.6 | 361.7 |
| Laminated plate | 190.0 | 342.0 |
| Other | 20.5 | 19.7 |
| Other flat glass, not classified by type | (X) | 2.6 |

* Includes shipments of establishments classified in other industries and shipping these products as "secondary" products.

** For sheet glass the unit of measure is in millions of boxes, 50 square feet each, single strength or equivalent.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF FLAT GLASS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 810.9 |
| 1966 | 816.8 |
| 1965 | 869.6 |
| 1964 | 752.3 |
| 1963 | 733.1 |
| 1958 | 547.0 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3229 - PRESSED AND BLOWN GLASS AND GLASSWARE, NOT ELSEWHERE CLASSIFIED

SIC Definition: Establishments primarily engaged in manufacturing glass and glassware, not elsewhere classified, pressed, blown, or shaped from glass produced in the same establishment. Establishments primarily engaged in manufacturing textile glass fibers are included in this industry, but establishments primarily engaged in manufacturing glass wool insulation products are classified in Industry 3296. Establishments primarily engaged in the production of pressed lenses for vehicular lighting, beacons, and lanterns are also included in this industry, but establishments primarily engaged in the production of optical lenses are classified in Industry 3831. Establishments primarily engaged in manufacturing glass containers are classified in Industry 3221, and complete electric light bulbs in Industry 3641.[1/]

Materials include glass sand, sodium carbonate (soda ash), sodium sulfate (including salt cake), cullet (glass scrap), clay and nonclay refractories, and packing materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $859.1 million in shipments of pressed and blown glass, n.e.c., in 1967 (98% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $27.1 million. Tables 3 and 4 list all shipments of pressed and blown glass, n.e.c., including those produced as secondary products of other industries.

The general production trends in this industry are upwards, in spite of varying results in different classes of glassware in some years. Demand can be expected to increase with the growth of population, but competition from plastic products could become a major problem. The versatility of glass is being expanded, however, by combination with other materials -- either by the coating of the glass, or by modification of the basic glass composition. A bright future is also predicted by the industry for glass fiber, both in textiles and in its use as reinforcement for tires.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) confirm the overall growth of the industry, with estimated

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1/ See page 129.

shipments of $1,027.6 million in 1969 compared with $880.4 million in 1967. Glass fiber shipments showed substantial growth, increasing from $138.1 million in 1967 to an estimated $235.8 million in 1969.

Table 1

LOCATION OF MANUFACTURERS* OF PRESSED AND BLOWN GLASS AND GLASSWARE, NOT ELSEWHERE CLASSIFIED, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 185 | 113 | 42.5 | 886.2 |
| Northeast Region | 63 | 35 | 2.5 and over | (D) |
| North Central Region | 42 | 28 | 14.9 | 320.3 |
| West Region | 11 | 3 | .25 to .5 | (D) |
| South Region | 69 | 47 | 14.3 | 266.9 |
| South Atlantic Division | 46 | 37 | 11.6 | 213.8 |
| Virginia | 1 | 1 | .25 to .5 | (D) |
| West Virginia | 35 | 30 | 6.9 | 115.6 |
| North Carolina | 3 | 3 | 1.0 to 2.5 | (D) |
| South Carolina | 3 | 2 | 2.5 and over | (D) |
| East South Central Division | 9 | 6 | 1.7 | 34.4 |
| Kentucky | 4 | 4 | 1.0 to 2.5 | (D) |
| Tennessee | 3 | 1 | .5 to 1.0 | (D) |
| West South Central Division | 14 | 4 | .9 | 18.6 |
| Oklahoma | 5 | 2 | .5 to 1.0 | (D) |

* Manufacturers whose primary product is pressed and blown glass.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 999 | 1,000 to 2,499 |
| Total Establishments | 185 | 72 | 29 | 55 | 17 | 12 |
| All Employees (000) | 42.5 | .4 | 1.5 | 12.0 | 11.5 | 17.2 |
| Payroll ($000,000) | 262.3 | 1.9 | 8.4 | 71.0 | 73.4 | 107.6 |
| Production Workers (000) | 36.5 | .3 | 1.2 | 10.3 | 9.9 | 14.7 |
| Man-Hours (000,000) | 72.2 | .5 | 2.4 | 20.3 | 20.0 | 29.0 |
| Wages ($000,000) | 211.6 | 1.4 | 6.3 | 55.9 | 60.1 | 87.9 |
| Value Added by Manufacture ($000,000) | 658.9 | 3.3 | 15.6 | 176.4 | 216.1 | 247.4 |
| Cost of Materials ($000,000) | 237.2 | 1.7 | 8.6 | 51.3 | 87.2 | 88.3 |
| Value of Shipments ($000,000) | 886.2 | 5.1 | 23.7 | 224.3 | 299.4 | 333.7 |
| Capital Expenditures, New ($000,000) | 81.9 | .5 | 1.1 | 40.3 | 14.7 | 25.3 |

* Manufacturers whose primary product is pressed and blown glass.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF PRESSED AND BLOWN GLASS, NOT ELSEWHERE CLASSIFIED, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 880.4 |
| Table, kitchen, art, and novelty glassware | 266.9 |
| Machine-made | |
| Tumblers (one-piece, excluding packers' tumblers) | 69.4 |
| Stemware | 19.8 |
| Tableware, cookware, ovenware, kitchenware | 107.1 |
| Ornamental, decorative, novelty glassware, and smokers' accessories | 25.7 |
| Handmade and miscellaneous, not classified by type | 44.9 |
| Lighting and electronic glassware | 328.9 |
| Automotive lighting glassware | 17.1 |
| Searchlight and other lenses | 4.1 |
| Tubing and cane for electric light bulbs and fluorescent and neon lighting | 31.7 |
| Bowls and enclosing globes, lamp chimneys, lamp parts, shades, reflectors, torchiers, and other interior and exterior lighting | |
| Interior | 24.7 |
| Exterior | 8.2 |
| Other, including television tube blanks and parts, electric light bulb blanks, electronic tube blanks, and tubing, cane, and other glass parts for electronic tubes and devices | 243.1 |
| Textile type fiber | 138.1 |
| Roving chopped strand and milled fiber | 37.6 |
| Other | 100.5 |
| Other pressed and blown glassware, including scientific and industrial | 137.5 |
| Pressed and blown glassware, not specified by type | 9.0 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF PRESSED AND BLOWN GLASSWARE, NOT ELSEHWERE CLASSIFIED, 1958, 1963 TO 1967
(in millions of dollars)

| | Total* | Table, Kitchen, Art, and Novelty | Lighting and Electronic | Glass Fiber |
|---|---|---|---|---|
| 1967 | 880.4 | 266.9 | 328.9 | 138.1 |
| 1966 | 932.5 | 261.5 | 375.0 | 150.3 |
| 1965 | 777.1 | 247.6 | 279.5 | 127.8 |
| 1964 | 715.1 | 258.0 | 243.2 | 108.5 |
| 1963 | 615.1 | 220.3 | 210.3 | 91.6 |
| 1958 | 448.0 | 149.0 | 143.3 | 59.7 |

* Includes other pressed and blown glassware.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3262 - VITREOUS CHINA TABLE AND KITCHEN ARTICLES

SIC Definition: Establishments primarily engaged in manufacturing vitreous china table and kitchen articles for use in households and in hotels, restaurants, and other commercial institutions for preparing, serving, or storing food or drink. Establishments primarily engaged in manufacturing fine (semi-vitreous) types of earthenware (whiteware) table and kitchen articles are classified in Industry 3263.[1/]

Materials used include flint; feldspar; kaolin; ball clay; glaze materials; containers and packing materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $62.0 million in shipments of vitreous china table and kitchen articles in 1967 (89% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $5.2 million. Tables 3 and 4 list all shipments of vitreous china table and kitchen articles, including those produced as secondary products of other industries.

The materials used in vitreous china are basically the same as for semi-vitreous ware, with, perhaps, some changes in proportions, and possible additions of bone ash or mullite for variations in quality. Both types of product are glazed. The major difference is in the firing, which is done at higher temperatures for vitreous china than for semi-vitreous ware, and produces articles of greater strength and resistance to chipping.

Shipments of vitreous china have been increasing steadily (Table 4), and preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show a continuation of this trend. Estimated shipments in 1969 were $80.2 million compared with $69.6 million in 1967.

Since supplies of kaolin, feldspar, and kyanite are readily available in Georgia, and ball clay is plentiful in Tennessee, there would appear to be good potential for vitreous china production in the state.

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1/ See page 62.

Table 1

LOCATION OF MANUFACTURERS* OF VITREOUS CHINA TABLE AND KITCHEN ARTICLES, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 39 | 28 | 7.0 | 67.2 |
| Northeast Region | 13 | 10 | 5.1 | 52.5 |
| North Central Region | 11 | 8 | 1.5 | 11.4 |
| West Region | 11 | 7 | .4 | 2.5 |
| South Region | 4 | 3 | .1 | .8 |

* Manufacturers whose primary product is vitreous china table and kitchen articles.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 249 | 250 to 499 | 1,000 to 2,499 |
| Total Establishments | 39 | 11 | 15 | 4 | 6 | 3 |
| All Employees (000) | 7.0 | ** | .8 | .6 | 2.2 | 3.4 |
| Payroll ($000,000) | 36.1 | .4 | 3.2 | 2.6 | 11.0 | 19.0 |
| Production Workers (000) | 6.0 | .1 | .6 | .5 | 2.0 | 2.8 |
| Man-Hours (000,000) | 11.2 | .1 | 1.2 | .9 | 3.5 | 5.4 |
| Wages ($000,000) | 27.3 | .1 | 2.6 | 2.1 | 8.5 | 13.9 |
| Value Added by Manufacture ($000,000) | 55.8 | .5 | 4.2 | 3.0 | 15.4 | 32.6 |
| Cost of Materials ($000,000) | 12.7 | .3 | 1.4 | .7 | 4.9 | 5.5 |
| Value of Shipments ($000,000) | 67.2 | .8 | 5.6 | 4.1 | 19.4 | 37.2 |
| Capital Expenditures, New ($000,000) | 1.9 | *** | .3 | | .4 | 1.2 |

* Manufacturers whose primary product is vitreous china table and kitchen articles.

** Under 50 employees.

*** Under $50,000.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENT OF VITREOUS CHINA TABLE AND KITCHEN ARTICLES, BY CLASS OF PRODUCT, 1967*

| | Quantity (000,000 dozen pieces) | Value ($000,000) |
|---|---|---|
| Vitreous china and porcelain table and kitchen articles (feldspar and bone) | (X) | 69.6 |
| Tableware (for serving food and drink) | | |
| Hotel or commercial | 8.0 | 46.6 |
| Household | .6 | 20.3 |
| Kitchenware, household and commercial (for cooking, preparing, and storing food and drink) | .2 | 1.2 |
| Vitreous china food utensils (not identified) | (X) | 1.6 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF VITREOUS CHINA TABLE AND KITCHEN ARTICLES, 1958, 1963 TO 1967 (in millions of dollars)

| | |
|---|---|
| 1967 | 69.6 |
| 1966 | 62.4 |
| 1965 | 58.6 |
| 1964 | 55.6 |
| 1963 | 51.9 |
| 1958 | 46.9 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3263 - FINE EARTHENWARE (WHITEWARE) TABLE AND KITCHEN ARTICLES

SIC Definition: Establishments primarily engaged in manufacturing fine (semi-vitreous) types of earthenware table and kitchen articles for preparing, serving, or storing food or drink. Establishments primarily engaged in manufacturing vitreous china table and kitchen articles are classified in Industry 3262.

Materials used include flint; feldspar; kaolin; ball clay; glaze materials; containers and packing materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $40.0 million in shipments of fine earthenware table and kitchen articles in 1967 (86% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $7.1 million. Tables 3 and 4 list all shipments of fine earthenware table and kitchen articles, including those produced as secondary products of other industries.

Semi-vitreous ware is fired at a lower temperature than vitreous china, and as a result the clay remains more porous. A hard, non-porous, glass-like coating (glaze) is used to make the articles acceptable for serving or preparing food or drink. Vitreous china is also finished with a glaze, but the higher temperatures used for this ware creates a body of more glass-like consistency, with which the glaze can bond more firmly. As a result the vitreous china is more resistant to chipping than semi-vitreous ware.

Past records indicate that demand for semi-vitreous ware has fluctuated, showing a tendency to decrease in recent years. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census), however, show some improvement, with shipments estimated at $58.3 million compared with $46.7 million in 1967.

Georgia can supply most of the clays used for this product, and Tennessee is a major source for ball clay, so the potential for a factory making semi-vitreous ware in Georgia would appear to be good.

Table 1

LOCATION OF MANUFACTURERS* OF FINE EARTHENWARE TABLE AND KITCHEN ARTICLES, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 21 | 17 | 5.9 | 47.1 |
| Northeast Region | 3 | 2 | .25 to .5 | (D) |
| North Central Region | 6 | 6 | 2.4 | 18.4 |
| West Region | 8 | 6 | .5 to 1.0 | (D) |
| South Region | 4 | 3 | 1.0 to 2.5 | (D) |
| South Atlantic Division | 3 | 3 | 1.0 to 2.5 | (D) |
| West Virginia | 3 | 3 | 1.0 to 2.5 | (D) |

* Manufacturers whose primary product is fine earthenware table and kitchen articles.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment: Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
|---|---|---|---|---|---|
| Total Establishments | 21 | 4 | 5 | 7 | 5 |
| All Employees (000) | 5.9 | ** | .2 | 1.7 | 4.0 |
| Payroll ($000,000) | 27.5 | .1 | .9 | 7.4 | 19.0 |
| Production Workers (000) | 5.3 | ** | .2 | 1.4 | 3.7 |
| Man-Hours (000,000) | 9.8 | *** | .4 | 2.7 | 6.7 |
| Wages ($000,000) | 22.6 | .1 | .7 | 5.8 | 15.9 |
| Value Added by Manufacture ($000,000) | 34.6 | .1 | 1.2 | 10.0 | 23.3 |
| Cost of Materials ($000,000) | 12.4 | .1 | .4 | 3.1 | 8.8 |
| Value of Shipments ($000,000) | 47.1 | .2 | 1.7 | 13.3 | 31.8 |
| Capital Expenditures, New ($000,000) | 1.0 | *** | *** | .2 | .9 |

* Manufacturers whose primary product is fine earthenware table and kitchen articles.

** Under 50.

*** Under 50,000.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF FINE EARTHENWARE (WHITEWARE) TABLE AND KITCHEN ARTICLES, BY CLASS OF PRODUCT, 1967*

| | Quantity (000,000 dozen pieces) | Value ($000,000) |
|---|---|---|
| Total | (X) | 46.7 |
| Tableware, household and commercial (for serving food and drink) | 22.9 | 44.6 |
| Kitchenware, household and commercial (for cooking, preparing, and storing food and drink | (S) | 2.1 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

(S) Withheld.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF FINE EARTHENWARE TABLE AND KITCHEN ARTICLES, 1958, 1963 TO 1967 (in millions of dollars)

| | |
|---|---|
| 1967 | 46.7 |
| 1966 | 46.3 |
| 1965 | 51.1 |
| 1964 | 59.3 |
| 1963 | 58.2 |
| 1958 | 53.5 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3392 - NONFERROUS FORGINGS

SIC Definition: Establishments primarily engaged in manufacturing nonferrous forgings, with or without the use of dies. These establishments generally operate on a job or order basis, manufacturing forgings for sale to others or for interplant transfer. Establishments which produce nonferrous forgings and which are also engaged in fabricating operations, such as machining, assembling, etc., in manufacturing a specified product are classified in the industry of the specified product. Nonferrous forgings are made to a considerable extent by establishments classified in other industries that produce forgings for incorporation, in the same establishment, into such products as machinery, motor vehicles, etc.

Materials include aluminum and aluminum-base alloy; copper and copper-base alloy; titanium and titanium-base alloy; magnesium and magnesium-base alloy; zirconium and zirconium-base alloy; brass; bronze; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $187.3 million in shipments of nonferrous forgings in 1967 (54% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $145.8 million. Secondary products of nonferrous forgings manufacturers included iron and steel forgings; special dies, tools, jigs, and fixtures; and various types of machinery and equipment.

Tables 3 and 4 list all shipments of nonferrous forgings, including those produced as secondary products of other industries, valued at $160.8 million. Table 4 shows a steady growth in shipments of nonferrous forgings. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census), indicate some modification of this trend in 1968, but the 1969 figures continue the upward movement with estimated shipments of $350.5 million.

Industrial needs for all types of forgings (ferrous and nonferrous) can be expected to expand substantially in the years ahead, particularly in the Southeast, where metalworking facilities have been showing rapid growth. A recent study by Dr. Tze Chiang[1/] pinpoints the many advantages that would be

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1/ The Market for Commercial Forgings in the Southeast and the Potentials for Forging Facilities in Georgia, by Tze I. Chiang, Industrial Development Division, Georgia Institute of Technology, May 1970.

obtained by a new forging plant locating in Georgia to supply the Southeast Region, including a centralized location, shorter delivery time, freight savings, and lower labor cost.

Table 1

LOCATION OF MANUFACTURERS* OF NONFERROUS FORGINGS, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 41 | 31 | 10.1 | 333.1 |
| Northeast Region | 11 | 9 | 2.6 | 84.9 |
| North Central Region | 13 | 9 | 1.0 to 2.5 | (D) |
| West Region | 11 | 10 | 1.5 | 51.9 |
| South Region | 6 | 3 | 2.5 and over | (D) |
| West South Central Division | 2 | 2 | 2.5 and over | (D) |
| Texas | 2 | 2 | 2.5 and over | (D) |
| South Atlantic and East South Central Divisions | 4 | 1 | N/A | N/A |

* Manufacturers whose primary product is nonferrous forgings.

(D) Withheld to avoid disclosing figures for individual companies.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 999 | 1,000 or More |
| Total Establishments | 41 | 10 | 16 | 12 | 3 |
| All Employees (000) | 10.1 | .1 | .7 | 3.1 | 6.1 |
| Payroll ($000,000) | 87.5 | .6 | 6.3 | 25.4 | 55.2 |
| Production Workers (000) | 7.4 | .1 | .6 | 2.4 | 4.4 |
| Man-Hours (000,000) | 16.5 | .2 | 1.3 | 5.1 | 9.9 |
| Wages ($000,000) | 61.4 | .5 | 4.4 | 18.9 | 37.7 |
| Value Added by Manufacture ($000,000) | 154.4 | 1.2 | 18.1 | 49.6 | 85.5 |
| Cost of Materials ($000,000) | 178.0 | 1.7 | 10.9 | 55.7 | 109.9 |
| Value of Shipments ($000,000) | 333.1 | 2.9 | 28.7 | 105.4 | 196.2 |
| Capital Expenditures, New ($000,000) | 32.4 | .1 | 5.8 | 3.7 | 22.6 |

* Manufacturers whose primary product is nonferrous forgings.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF NONFERROUS FORGINGS, BY CLASS OF PRODUCT, 1967*

| | Short Tons (000) | Value ($000,000) |
|---|---|---|
| Total | (X) | 348.1 |
| Copper and copper-base alloy | 28.4 | 54.9 |
| Aluminum and aluminum-base alloy | | |
| Closed-die | 62.6 | 158.5 |
| Open-die | 16.2 | 31.6 |
| Magnesium and magnesium-base alloy | .2 | 2.0 |
| Titanium and titanium-base alloy | 5.5 | 61.2 |
| Other nonferrous metal forgings, including nonferrous forgings, not classified by type | (X) | 39.9 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF NONFERROUS FORGINGS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 348.1 |
| 1966 | 334.1 |
| 1965 | 236.7 |
| 1964 | 214.9 |
| 1963 | 198.4 |
| 1958 | 132.0 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3492 - SAFES AND VAULTS

SIC Definition: Establishments primarily engaged in manufacturing fire or burglary-resistive steel safes and vaults (except concrete grave vaults, Industry 3272; metal grave vaults, Industry 3994) and similar fire or burglary-resistive products.

Materials include mill shapes and forms of carbon, alloy, and stainless steel; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for approximately $70.0 million in shipments of safes and vaults in 1967 (85%-90% of all shipments of these goods), with secondary products and miscellaneous receipts totaling roughly $30.0 million. Tables 3 and 4 list all shipments of safes and vaults, including those produced as secondary products of other industries.

The major employment center for this industry is in Ohio, and there appears to be no good reason why this situation should change. Branches of the major companies are, however, located in other states, as are some comparatively small independent firms.

Shipments of safes and vaults increased by 76% between 1958 and 1967, and the current awareness of the need for both personal and property protection should continue to boost sales of fire and burglary-resistive products -- including the alarm systems that can be made part of the basic equipment. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) confirm this upward trend, with shipments estimated at $117.9 million compared with $79.5 million in 1967 -- an increase of over 48% in the two-year period.

Table 1

LOCATION OF MANUFACTURERS* OF SAFES AND VAULTS, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 32 | 18 | 3.8 | 98.7 |
| North Central Region | 15 | 10 | 2.5 and over | (D) |
| West Region | 9 | 5 | less than .25 | (D) |
| Northeast and South Regions | 8 | 3 | N/A | N/A |

* Manufacturers whose primary product is safes and vaults.

(D) Withheld to avoid disclosing figures for individual companies.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment: Under 20 | 20 to 249 | 1,000 to 2,499 |
|---|---|---|---|---|
| Total Establishments | 32 | 14 | 16 | 2 |
| All Employees (000) | 3.8 | .1 | 3.7 | |
| Payroll ($000,000) | 26.6 | .6 | 26.1 | |
| Production Workers (000) | 2.6 | .1 | 2.5 | |
| Man-Hours (000,000) | 4.9 | .1 | 4.8 | |
| Wages ($000,000) | 16.4 | .4 | 16.0 | |
| Value Added by Manufacture ($000,000) | 67.1 | .9 | 66.1 | |
| Cost of Materials ($000,000) | 33.5 | .6 | 32.9 | |
| Value of Shipments ($000,000) | 98.7 | 1.4 | 97.1 | |
| Capital Expenditures, New ($000,000) | 3.1 | (D) | (D) | |

* Manufacturers whose primary product is safes and vaults.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF SAFES AND VAULTS, BY CLASS OF PRODUCT, 1967*

| | Quantity (000) | Value ($000,000) |
|---|---|---|
| Total | (X) | 79.5 |
| Safes and chests | | |
| Fire-resistive (primary purpose for which built) | 146.6 | 13.3 |
| Burglary-resistive (primary purpose for which built) | 23.7 | 6.6 |
| Safe deposit boxes | 622.5 | 14.2 |
| All other bank and security vaults and equipment, including bank security lockers, night depositaries, security equipment for drive-in windows and similar equipment, and signaling and alarm equipment when sold together with bank equipment and other interior equipment for safes and chests | (X) | 45.3 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF SAFES AND VAULTS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 79.5 |
| 1966 | 64.9 |
| 1965 | 63.1 |
| 1964 | 60.8 |
| 1963 | 59.3 |
| 1958 | 45.1 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3496 - COLLAPSIBLE TUBES

SIC Definition: Establishments primarily engaged in manufacturing collapsible tubes defined as cylindrical containers for viscous products, made of thin flexible metal, usually of tin, tin-lined lead, lead, lead-tin alloy, or aluminum, with integral shoulder and neck, provided with an appropriate size opening in the throat, and usually with a screw cap made of plastic material for closure over the neck.

Materials include aluminum and aluminum-base alloy refinery shapes; lead; tin; lead-tin alloy; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $50.9 million in shipments of collapsible tubes in 1967; this figure also represented the total shipments of this product -- no shipments as secondary products of other industries being recorded. The makers of collapsible tubes, however, produced some secondary products (such as metal cans and miscellaneous plastic products) totaling $12.7 million in shipments, plus miscellaneous receipts of $1.4 million to bring their total shipments of all products to $65.0 million.

Table 4 indicates that growth in this industry faltered in 1967, with shipments dropping back from the previous year. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census), however, show a substantial increase, with estimated shipments of $62.5 million.

An important factor in the near future may be strong competition from tubes made of plastic, even though the flexible plastic tubes do not "collapse" as adequately as the metal variety for the ready extraction of the last of the tube's contents. Use of plastic tubes also may be hindered by the problem of pollution unless some way can be found of breaking down the plastic for easy disposal.

If the switch over to plastic grows, however, this in itself might prove to be an opportunity for a plant to be located in Georgia for the manufacture of plastic tubes and bottles.

Table 1

LOCATION OF MANUFACTURERS* OF COLLAPSIBLE TUBES, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 19 | 18 | 4.3 | 65.0 |
| Northeast Region | 10 | 10 | 2.9 | 42.1 |
| North Central Region | 4 | 3 | .4 | 6.0 |
| West Region | 2 | 2 | less than .5 | (D) |
| South Region | 3 | 3 | .5 to 1.0 | (D) |
| East South Central Division | 1 | 1 | less than .25 | (D) |
| West South Central Division | 1 | 1 | .25 to .5 | (D) |
| Arkansas | 1 | 1 | .25 to .5 | (D) |
| South Atlantic Division | 1 | 1 | .25 to .5 | (D) |
| West Virginia | 1 | 1 | .25 to .5 | (D) |

* Manufacturers whose primary product is collapsible tubes.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | |
|---|---|---|---|---|
| | Total | Under 100 | 100 to 499 | 500 to 999 |
| Total Establishments | 19 | 8 | 8 | 3 |
| All Employees (000) | 4.3 | .4 | 1.8 | 2.1 |
| Payroll ($000,000) | 23.6 | 2.0 | 10.3 | 11.2 |
| Production Workers (000) | 3.9 | .4 | 1.6 | 1.9 |
| Man-Hours (000,000) | 7.6 | .7 | 3.2 | 3.6 |
| Wages ($000,000) | 18.7 | 1.6 | 8.0 | 9.1 |
| Value Added by Manufacture ($000,000) | 38.5 | 3.9 | 17.0 | 17.6 |
| Cost of Materials ($000,000) | 26.8 | 2.5 | 11.9 | 12.4 |
| Value of Shipments ($000,000) | 65.0 | 6.4 | 29.0 | 29.7 |
| Capital Expenditures, New ($000,000) | 4.1 | .1 | 1.1 | 2.9 |

* Manufacturers whose primary product is collapsible tubes.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF COLLAPSIBLE TUBES, BY CLASS OF PRODUCT, 1967*

| | Quantity (000,000 gross) | Value ($000,000) |
|---|---|---|
| Total | (X) | 50.9 |
| Aluminum | 6.6 | 31.7 |
| Lead | 2.2 | 11.9 |
| Tin | .8 | 6.4 |
| Other, including tin-coated and tin-lead alloy | (X) | .4 |
| Collapsible tubes, not classified by type | (X) | .5 |

* No shipments are recorded of establishments classified in other industries and shipping these products as "secondary" products. All shipments, then, are the primary products of the manufacturers listed in Tables 1 and 2.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF COLLAPSIBLE TUBES, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 50.9 |
| 1966 | 53.6 |
| 1965 | 50.7 |
| 1964 | 45.7 |
| 1963 | 44.2 |
| 1958 | 37.2 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3497 - METAL FOIL AND LEAF

SIC Definition: Establishments primarily engaged in manufacturing gold, silver, tin, and other metal foil (including converted metal foil) and leaf. Establishments primarily engaged in manufacturing plain aluminum foil are classified in Industry 3352.

Materials include aluminum and aluminum-base alloy; copper; gold; lead; magnesium and magnesium-base alloy; nickel; platinum and platinum-base alloy; silver; tin; zinc; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $215.1 million in shipments of metal foil and leaf in 1967 (56% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $50.4 million. Tables 3 and 4 list all shipments of metal foil and leaf, including that produced as a secondary product of other manufacturing industries.

A substantial proportion of metal foil and leaf is manufactured as a secondary line of production ($170.5 million in 1967 -- 44% of shipments). Industry 3352, with a primary product of rolled and drawn aluminum, accounted for most of this, with 1967 shipments of metal foil and leaf totaling $113.1 million. A further $44.0 million was shipped by industries producing coated and glazed paper (SIC 2641) and converted paper products, n.e.c. (SIC 2649).

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate that the upward trend in total shipments shown in Table 4 is continuing. Estimated shipments in 1969 were $418.4 million, up from $385.6 million in 1967.

Table 1

LOCATION OF MANUFACTURERS* OF METAL FOIL AND LEAF, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 72 | 46 | 6.6 | 265.5 |
| Northeast Region | 37 | 23 | 2.0 | 76.6 |
| North Central Region | 16 | 11 | 3.2 | 116.6 |
| West Region | 7 | 4 | .4 | 15.3 |
| South Region | 12 | 8 | .9 | 57.0 |
| East South Central Division | 4 | 3 | N/A | (D) |
| West South Central Division | 1 | 1 | less than .25 | (D) |
| Texas | 1 | 1 | less than .25 | (D) |
| South Atlantic Division | 7 | 4 | .5 to 1.0 | (D) |
| Virginia | 3 | 1 | .25 to .5 | (D) |
| Georgia** | 1 | 1 | less than .25 | (D) |

* Manufacturers whose primary product is metal foil and leaf.

** The 1971 Georgia Manufacturing Directory does not include any company in this category. It is not known whether the company referred to above is still in operation.

(D) Withheld to avoid disclosing figures for individual companies.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 249 | 250 to 2,499 |
| Total Establishments | 72 | 26 | 30 | 10 | 6 |
| All Employees (000) | 6.6 | .2 | 1.4 | 1.7 | 3.2 |
| Payroll ($000,000) | 48.7 | 1.4 | 10.4 | 12.1 | 24.9 |
| Production Workers (000) | 4.8 | .2 | 1.0 | 1.2 | 2.4 |
| Man-Hours (000,000) | 10.3 | .2 | 2.4 | 2.8 | 4.9 |
| Wages ($000,000) | 31.1 | .8 | 6.6 | 7.3 | 16.4 |
| Value Added by Manufacture ($000,000) | 104.9 | 4.6 | 20.0 | 29.2 | 51.1 |
| Cost of Materials ($000,000) | 160.0 | 7.1 | 40.9 | 27.3 | 84.7 |
| Value of Shipments ($000,000) | 265.5 | 11.6 | 60.7 | 56.4 | 136.7 |
| Capital Expenditures, New ($000,000) | 10.6 | 2.1 | 1.3 | 2.5 | 4.7 |

* Manufacturers whose primary product is metal foil and leaf.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF METAL FOIL AND LEAF, BY CLASS OF PRODUCT, 1967*

| | Metal Content (000,000 pounds) | Value ($000,000) |
|---|---|---|
| Total | (X) | 385.6 |
| Metal foil and leaf (except plain aluminum foil) | | |
| Laminated or coated foil in rolls and sheet, plain or printed | | |
| Foil laminated and/or coated with polyethylene | 47.0 | 53.5 |
| Foil laminated and/or coated with materials other than polyethylene | 80.0 | 91.0 |
| Converted aluminum foil products made of foil laminated to paper, polyethylene, etc., except bags and liners | | |
| Gift wrap | 14.0 | 18.6 |
| Wrappers and wraps | | |
| Food | 4.9 | 4.3 |
| Nonfood | .6 | 1.0 |
| Other, excluding bags and liners | 15.5 | 11.7 |
| Converted aluminum foil products (foil only) except bags and liners | | |
| Household, institutional, and freezer foil | 133.2 | 104.6 |
| Semirigid containers | 40.0 | 28.4 |
| Gift wrap | 1.4 | 1.9 |
| Other foil products, excluding bags and liners | 22.3 | 28.1 |
| Other foil, including composition (combination of two or more metals) | (X) | 20.2 |
| Leaf | | |
| Gold leaf | (X) | 1.0 |
| Other leaf | (X) | 13.4 |
| Metal foil and leaf, not classified by type | (X) | 7.9 |

* Includes shipments by establishments in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF METAL FOIL AND LEAF, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 385.6 |
| 1966 | 367.7 |
| 1965 | 354.1 |
| 1964 | 351.8 |
| 1963 | 329.9* |
| 1958 | 145.5 |

* Other tables in the 1967 Census indicate that the 1963 figure was revised downwards to $308.7 million.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3562 - BALL AND ROLLER BEARINGS

SIC Definition: Establishments primarily engaged in manufacturing ball and roller bearings and parts. Establishments primarily engaged in manufacturing bearings, except ball and roller, are classified in Industry 3566.

Materials include mill shapes and forms of carbon, alloy, and stainless steel; copper and copper-base alloy; rough and semifinished castings of iron, steel, aluminum and aluminum-base alloy, copper and copper-base alloy; metal powders; iron and steel forgings.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $1,259.9 million in shipments of ball and roller bearings in 1967 (97% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $68.6 million. Tables 3 and 4 list all shipments of ball and roller bearings, including those produced as secondary products of other industries.

The products of the ball and roller bearing industry are used in practically all machinery equipment with moving parts. Major customers include the automotive, aircraft, construction, and farm machinery industries. The requirements of the different users have become more and more exacting in recent years, with bearings needed for bigger machines on the one hand, and bearings of delicate precision required for use in miniaturized controls and instruments on the other. Many manufacturers have found it necessary to buy new equipment to produce bearings which meet the varied demands, and can now manufacture bearings with a longer life and ability to withstand increased speeds and wide variations in temperature.

Although there are still some independent producers, most bearing companies are now subsidiaries of, or affiliated with, other firms. The factories continue to operate as separate entities, however, concentrating on the production of bearings, and only rarely producing any secondary items.

The industry is expected to continue to expand along current lines, with machinery and equipment demanding components of increasing sophistication. New equipment to meet these demands may well be housed in new factories. With the increasing industrialization of the South, this could prove to be an opportunity for Georgia.

Shipments in recent years have been affected by the problems of some of the principal consumers, but current reports show signs of recovery. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) give estimated shipments in 1969 of $1,386.0 million, compared with $1,292.2 million in 1967 and the previous peak of $1,330.6 million in 1966. Returns for 1970 indicate another dip, but the 1971 figures are expected to show an improved position.

Table 1

LOCATION OF MANUFACTURERS* OF BALL AND ROLLER BEARINGS, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 124 | 97 | 58.8 | 1,328.5 |
| Northeast Region | 64 | 51 | 32.8 | 660.6 |
| North Central Region | 39 | 28 | 22.3 | 580.8 |
| West Region | 6 | 5 | .7 | 14.0 |
| South Region | 15 | 13 | 3.0 | 73.1 |
| South Atlantic Division | 11 | 10 | 2.1 | 52.4 |
| Virginia | 2 | 2 | .25 to .5 | (D) |
| North Carolina | 1 | 1 | less than .25 | (D) |
| South Carolina | 7 | 7 | 1.5 | 29.3 |
| East South Central Division | 2 | 2 | .5 to 1.0 | (D) |
| Kentucky | 1 | 1 | .25 to .5 | (D) |
| Tennessee | 1 | 1 | .25 to .5 | (D) |
| West South Central Division | 2 | 1 | .25 to .5 | (D) |
| Oklahoma | 2 | 1 | .25 to .5 | (D) |

* Manufacturers whose primary product is ball and roller bearings.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | | | |
|---|---|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 999 | 1,000 to 2,500 | 2,500 or More |
| Total Establishments | 124 | 27 | 27 | 39 | 15 | 11 | 5 |
| All Employees (000) | 58.8 | .2 | 1.5 | 9.2 | 11.5 | 18.3 | 18.1 |
| Payroll ($000,000) | 456.0 | 1.4 | 10.3 | 64.0 | 84.1 | 145.3 | 150.7 |
| Production Workers (000) | 47.5 | .2 | 1.2 | 7.4 | 9.1 | 14.7 | 14.9 |
| Man-Hours (000,000) | 100.9 | .4 | 2.5 | 15.7 | 18.6 | 31.2 | 32.5 |
| Wages ($000,000) | 343.5 | 1.1 | 7.1 | 46.0 | 63.0 | 111.4 | 114.9 |
| Value Added by Manufacture ($000,000) | 833.3 | 2.5 | 20.4 | 141.4 | 173.7 | 262.2 | 232.9 |
| Cost of Materials ($000,000) | 510.8 | 2.0 | 11.5 | 90.4 | 102.6 | 152.2 | 152.2 |
| Value of Shipments ($000,000) | 1,328.6 | 4.5 | 31.7 | 231.2 | 269.0 | 408.1 | 384.0 |
| Capital Expenditures, New ($000,000) | 107.1 | .3 | 4.5 | 12.2 | 13.8 | 41.5 | 34.9 |

* Manufacturers whose primary product is ball and roller bearings.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF BALL AND ROLLER BEARINGS, BY CLASS OF PRODUCT, 1967*

| | Quantity (000,000) | Value ($000,000) |
|---|---|---|
| Ball and roller bearings, total | (X) | 1,292.2 |
| Ball bearings, complete, total | (X) | 472.7 |
| Annular, ground or precision (including self-aligning) | 270.1 | 424.4 |
| Annular, unground (including self-aligning) | 89.5 | 9.5 |
| Thrust, ground | 9.0 | 14.6 |
| Thrust, unground | 51.4 | 3.5 |
| Other, including not specified by kind | N/A | 20.7 |
| Taper (except thrust) roller bearings, complete | N/A | 367.7 |
| Other roller bearings, complete, total | (X) | 225.0 |
| Cylindrical, except thrust | 43.0 | 99.2 |
| Spherical (including hourglass and barrel but excluding thrust) | 2.9 | 50.2 |
| Needle | 98.7 | 36.4 |
| Thrust (all types) | 47.9 | 25.0 |
| Other, including not specified by kind | (X) | 14.1 |
| Mounted bearings, total | (X) | 96.0 |
| Ball | 14.6 | 57.9 |
| Roller | N/A | 36.7 |
| Not specified by kind | (X) | 1.3 |
| Parts and components for ball and roller bearings, including balls and rollers, sold separately | (X) | 118.7 |
| All other | (X) | 12.1 |

* Includes shipments of establishments classified in other industries, shipping these products as "secondary" products.

(X) Not applicable

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF BALL AND ROLLER BEARINGS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 1,292.2 |
| 1966 | 1,330.6 |
| 1965 | 1,223.7 |
| 1964 | 1,084.6 |
| 1963 | 961.0 |
| 1958 | 636.8 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3567 - INDUSTRIAL PROCESS FURNACES AND OVENS

SIC Definition: Establishments primarily engaged in manufacturing industrial process furnaces, ovens, induction and dielectric heating equipment, and related devices.

Materials include mill shapes and forms of carbon, alloy, and stainless steel; copper and copper-base alloy; aluminum and aluminum-base alloy; steel castings; industrial pumps and air and gas compressors; electrical distribution and control equipment regulators; electric motors and generators; measuring instruments.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $365.6 million in shipments of industrial furnaces and ovens in 1967 (88% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $130.1 million. These secondary products included special industry machinery, household cooking equipment, housewares, fans, and miscellaneous appliances. Tables 3 and 4 list all shipments of industrial process furnaces and ovens produced by manufacturing establishments, including those produced as secondary products of other manufacturing industries. Excluded are industrial furnaces and ovens erected at the site by engineering and construction firms which purchase component parts for such furnaces and ovens.

Most of the companies in this industry are located in the North. Three plants have over 1,000 employees each, but nearly one-third of all establishments have less than five employees. Shipments increased steadily through 1967 (Table 4), but more recent figures indicate a drop in some types of furnaces and ovens. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show total estimated shipments of $381.5 million compared with $415.8 million in 1967. Electric industrial furnaces and ovens, metal processing, increased, however, from $90.8 million in 1967 to an estimated $100.9 million in 1969. The two other major lines (B and C in Table 4) decreased from $155.7 million and $149.0 million to estimated 1969 shipments of $136.9 million and $127.3 million, respectively.

Table 1

LOCATION OF MANUFACTURERS* OF INDUSTRIAL FURNACES AND OVENS, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 255 | 117 | 16.1 | 495.7 |
| Northeast Region | 93 | 48 | 6.7 | 202.9 |
| North Central Region | 108 | 54 | 8.2 | 261.4 |
| West Region | 40 | 11 | .9 | 22.9 |
| South Region | 14 | 4 | .3 | 8.5 |
| East South Central Division | 4 | 2 | less than .25 | (D) |

* Manufacturers whose primary product is industrial furnaces and ovens.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
| Total Establishments | 255 | 138 | 79 | 31 | 7 |
| All Employees (000) | 16.1 | .7 | 3.2 | 6.0 | 6.1 |
| Payroll ($000,000) | 129.3 | 6.3 | 25.0 | 45.9 | 52.1 |
| Production Workers (000) | 8.9 | .5 | 2.2 | 3.4 | 2.9 |
| Man-Hours (000,000) | 18.3 | 1.0 | 4.3 | 7.2 | 6.0 |
| Wages ($000,000) | 58.2 | 3.4 | 13.7 | 22.4 | 18.7 |
| Value Added by Manufacture ($000,000) | 259.4 | 11.4 | 48.1 | 87.4 | 112.4 |
| Cost of Materials ($000,000) | 236.1 | 10.0 | 40.1 | 85.9 | 100.2 |
| Value of Shipments ($000,000) | 495.7 | 21.4 | 86.9 | 174.2 | 213.2 |
| Capital Expenditures, New ($000,000) | 11.6 | 1.6 | 1.9 | 5.4 | 2.7 |

* Manufacturers whose primary product is industrial furnaces and ovens.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF INDUSTRIAL FURNACES AND OVENS, BY CLASS OF PRODUCT, 1967*

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Total | (X) | 415.9 |
| Electric industrial furnaces and ovens, metal processing | (X) | 90.8 |
| Electric furnaces, excluding induction | | |
| Metal melting | 457 | 19.8 |
| Metal processing and heat treating (such as annealing, hardening, carburizing, and porcelain enameling furnaces) | 2,264 | 46.2 |
| Electric, including infrared industrial ovens | N/A | 22.8 |
| Electric industrial furnaces and ovens, metal processing, not classified by type | (X) | 2.0 |
| Fuel-fired industrial furnaces and ovens, metal processing | (X) | 155.7 |
| Metal melting, including blast furnaces and cupolas | 1,397 | 16.9 |
| Metal processing and heat treating (such as annealing, hardening, carburizing, and porcelain enameling furnaces) | 3,535 | 93.3 |
| Industrial ovens | 3,459 | 28.3 |
| Hot rolling, forging, forming, and extruding furnaces and ovens | N/A | 14.8 |
| Fuel-fired industrial furnaces and ovens, metal processing, not classified by type | (X) | 2.3 |
| High frequency induction and dielectric heating equipment and parts, attachments and components | (X) | 149.0 |
| Induction furnaces and heating equipment | | |
| Radio frequency types, including spark gap | N/A | 18.0 |
| Line and motor-generators set frequency types | N/A | 9.9 |
| Industrial electric heating units and devices (except heating units for electric furnaces) | | |
| Dielectric heating equipment | (X) | 6.2 |
| Tubular heating | (X) | 6.4 |
| Other, including strip, space, and ring heaters; water and all immersion heaters; glue and compound pots; etc. | (X) | 40.9 |

(continued)

Table 3 (continued)

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Parts, attachments, and components for industrial furnaces and ovens, including electric heating units (sold separately) | (X) | 61.8 |
| High frequency induction and dielectric heating equipment and parts, attachments, and components, not classified by type | (X) | 5.8 |
| Industrial process furnaces and ovens, not classified by type | (X) | 20.3 |

* Includes shipments by establishments in other industries and shipping these products as "secondary" products. Excludes industrial furnaces and ovens erected at the site by engineering and construction firms which purchase component parts for such furnaces and ovens.

(X) Not applicable.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF INDUSTRIAL FURNACES AND OVENS, 1958, 1963 TO 1967
(in millions of dollars)

| | Total | A | B | C |
|---|---|---|---|---|
| 1967 | 415.9 | 90.8 | 155.7 | 149.0 |
| 1966 | 346.6 | 77.8 | 152.1 | 110.3 |
| 1965 | 308.9 | 62.9 | 128.2 | 112.0 |
| 1964 | 266.1 | 48.5 | 101.1 | 111.0 |
| 1963 | 237.7 | 44.7 | 76.6 | 109.9 |
| 1958 | 184.8 | 35.7 | 75.5 | 67.7 |

A - Electric industrial furnaces and ovens, metal processing.

B - Fuel-fired industrial furnaces and ovens, metal processing.

C - High frequency induction and dielectric heating equipment and parts, attachments, and components.

Totals include industrial furnaces and ovens, not classified by type.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3572 - TYPEWRITERS

SIC Definition: Establishments primarily engaged in manufacturing typewriters and parts.

Materials include mill shapes and forms of steel (carbon and alloy, including stainless), copper and copper-base alloy, aluminum and aluminum-base alloy; castings of steel, aluminum, and aluminum-base alloy; electric motors and generators; ball and roller bearings; electron tubes, solid state semiconductors, and other electronic components and accessories.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $502.9 million in shipments of typewriters and parts in 1967 (99% of all shipments of these goods), with secondary products (chiefly other office machines and parts) and miscellaneous receipts totaling $92.6 million. Tables 3 and 4 list all shipments of typewriters and parts, including those produced as secondary products of other industries.

Although the value of shipments of typewriters nearly doubled between 1963 and 1967, it was in the face of considerable competition from imports. Many of the imported machines are actually U. S. typewriter lines produced abroad. As domestic factories have become old and uneconomical, the U. S. manufacturers have turned to new facilities abroad, with foreign labor, rather than modernizing their plants in this country. In 1969 records show that 15% of the new domestic supply of complete typewriters (manufacturers' shipments plus imports minus exports) was accounted for by imports; by 1970 this figure had risen to 19%.[1/]

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate that this expansion of imports is affecting the growth of domestic production. Total domestic shipments of typewriters and parts in 1969 were estimated at $461.2 million compared with the 1967 figure of $508.1 million.

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1/ U. S. Bureau of the Census, Current Industrial Reports, Series M35C.

Table 1

LOCATION OF MANUFACTURERS* OF TYPEWRITERS, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 25 | 17 | 26.0 | 595.5 |
| Northeast Region | 11 | 9 | 2.5 and over | (D) |
| North Central Region | 3 | 3 | 1.0 to 2.5 | (D) |
| West Region | 4 | - | N/A | (D) |
| South Region | 7 | 5 | 2.5 and over | (D) |
| South Atlantic Division | 2 | 1 | 1.0 to 2.5 | (D) |
| South Carolina | 1 | 1 | 1.0 to 2.5 | (D) |
| East South Central Division | 5 | 4 | 2.5 and over | (D) |
| Kentucky | 5 | 4 | 2.5 and over | (D) |

* Manufacturers whose primary product is typewriters and parts.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 50 | 50 to 249 | 250 to 999 | 1,000 or More |
| Total Establishments | 25 | 10 | 3 | 3 | 9 |
| All Employees (000) | 26.0 | .1 | .4 | 1.9 | 23.6 |
| Payroll ($000,000) | 172.1 | .8 | 1.8 | 12.1 | 157.4 |
| Production Workers (000) | 19.9 | .1 | .3 | 1.3 | 18.2 |
| Man-Hours (000,000) | 39.3 | .3 | .7 | 2.4 | 35.9 |
| Wages ($000,000) | 116.6 | .6 | 1.5 | 6.6 | 107.9 |
| Value Added by Manufacture ($000,000) | 454.7 | 1.3 | 3.1 | 35.3 | 414.8 |
| Cost of Materials ($000,000) | 155.2 | .3 | .7 | 8.7 | 145.4 |
| Value of Shipments ($000,000) | 595.5 | 1.5 | 3.7 | 44.9 | 545.4 |
| Capital Expenditures, New ($000,000) | 20.1 | .1 | .4 | .5 | 19.2 |

* Manufacturers whose primary product is typewriters and parts.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF TYPEWRITERS, BY CLASS OF PRODUCT, 1967*

| | Quantity (000) | Value ($000,000) |
|---|---|---|
| Total | (X) | 508.1 |
| Typewriters, including coded media, and parts and attachments produced by complete machine manufacturers | (X) | 499.8 |
| Standard (nonportable) | | |
| Electric | 682.7 | 200.2 |
| Nonelectric | 378.9 | 55.5 |
| Standard portable (including electric), and specialized typewriters and typewriter-principle machines | 866.7 | 180.3 |
| Parts and attachments sold separately | (X) | 50.6 |
| Other, not classified | (X) | 13.2 |
| Parts and attachments produced by other than complete machine manufacturers | (X) | 4.8 |
| Other, not classified | (X) | 3.5 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF TYPEWRITERS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 508.1 |
| 1966 | 432.2 |
| 1965 | 325.7 |
| 1964 | 293.0 |
| 1963 | 265.5 |
| 1958 | 188.6 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3574 - CALCULATING AND ACCOUNTING MACHINES, EXCEPT ELECTRONIC COMPUTING EQUIPMENT

SIC Definition: Establishments primarily engaged in manufacturing desk calculators, adding and accounting machines, cash registers, and similar equipment, except electronic computers. Establishments primarily engaged in manufacturing electronic computing equipment are classified in Industry 3573; typewriters in Industry 3572;[1/] and office duplicating machines and devices, autographic registers, and other office machines in Industry 3579.

Materials include mill shapes and forms of steel (carbon and alloy, including stainless); copper and copper-base alloy; aluminum and aluminum-base alloy; castings of steel, aluminum and aluminum-base alloy; electric motors and generators; ball and roller bearings; electron tubes, solid state semiconductors, and other electronic components and accessories.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $532.5 million in shipments of calculating and accounting machines in 1967 (84% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $175.3 million. Table 3 lists all shipments of calculating and accounting machines, including those produced as secondary products of other industries. Figures on past trends of such shipments are not available because prior to the 1967 revision of the Standard Industrial Classification, this industry was combined with electronic computing equipment.

The market for calculating and accounting machines continues to expand both at home and abroad, with the demand shifting to even more sophisticated machines. Electronic machines are replacing the electro-mechanical varieties, and as new devices are added, both calculators and accounting machines are becoming more like computers -- with memory banks, programming capabilities, and speed of operation. U. S. manufacturers hold a large part of the domestic market for special purpose machines and those with advanced scientific requirements. General purpose business machines and calculators, however, are increasingly being made overseas, either by subsidiaries of U. S. companies or by independent foreign producers -- particularly the Japanese.

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1/ See page 96.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show the continuing effects of this competition, with shipments of complete machines estimated at $467.8 million in 1969 compared with $464.3 million in 1967. Parts and attachments showed good growth, however (possibly due to the continued modification of special purpose machines), rising from $131.7 million in 1967 to an estimated $256.4 million in 1969.

Table 1

LOCATION OF MANUFACTURERS* OF CALCULATING AND ACCOUNTING MACHINES, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 138 | 51 | 38.4 | 707.8 |
| Northeast Region | 47 | 14 | 2.6 | 43.5 |
| North Central Region | 34 | 19 | 2.5 and over | (D) |
| West Region | 37 | 15 | 2.5 and over | (D) |
| South Region | 20 | 3 | 1.0 to 2.5 | (D) |
| South Atlantic Division | 11 | 1 | 1.0 to 2.5 | (D) |
| Virginia | 2 | 1 | 1.0 to 2.5 | (D) |
| West South Central Division | 9 | 2 | .25 to .5 | (D) |
| Arkansas | 1 | 1 | .25 to .5 | (D) |

* Manufacturers whose primary product is calculating and accounting machines.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 999 | 1,000 or More |
| Total Establishments | 138 | 87 | 31 | 14 | 6 |
| All Employees (000) | 38.4 | .4 | 1.4 | 4.6 | 32.0 |
| Payroll ($000,000) | 294.4 | 2.7 | 8.6 | 29.3 | 253.8 |
| Production Workers (000) | 31.3 | .3 | .9 | 3.5 | 26.6 |
| Man-Hours (000,000) | 58.6 | .5 | 1.8 | 6.8 | 49.4 |
| Wages ($000,000) | 219.8 | 1.4 | 4.8 | 17.3 | 196.2 |
| Value Added by Manufacture ($000,000) | 518.2 | 6.9 | 20.6 | 52.5 | 438.1 |
| Cost of Materials ($000,000) | 198.2 | 4.4 | 10.1 | 27.5 | 156.2 |
| Value of Shipments ($000,000) | 707.8 | 11.2 | 30.1 | 74.2 | 592.4 |
| Capital Expenditures, New ($000,000) | 32.6 | 3.2 | 1.2 | 2.9 | 25.3 |

* Manufacturers whose primary product is calculating and accounting machines.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF CALCULATING AND ACCOUNTING MACHINES, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 630.8 |
| Calculating and accounting machines, including cash registers, except parts and attachments | 464.3 |
| Parts and attachments for calculating and accounting machines | 131.7 |
| Calculating and accounting machines, not classified by type | 34.8 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3576 - SCALES AND BALANCES, EXCEPT LABORATORY

SIC Definition: Establishments primarily engaged in manufacturing weighing and force measuring machines and devices of all types, except those regarded as scientific apparatus for laboratory and experimental work, which are classified in Industry 3811.

Materials include mill shapes and forms of carbon, alloy, and stainless steel; copper and copper-base alloy; castings of aluminum and aluminum-base alloy; ball and roller bearings; electron tubes (except X-ray); solid state semiconductors; resistors, capacitors, transformers, sockets, and other electronic components and accessories, except solid state semiconductors; electric motors and generators; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $125.7 million in shipments of scales and balances, except laboratory, in 1967 (96% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $14.5 million. Tables 3 and 4 list all shipments of scales and balances, except laboratory, including those produced as secondary products of other industries.

Most of the scales and balances produced under this classification (Table 3) are widely used throughout the U. S., but the manufacturers themselves are concentrated in the North Central and Northeast regions. These two areas accounted for 93% of shipments in 1967; a further 6% came from the West Region, leaving 1% for the South (16 states plus the District of Columbia).

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show a substantial increase in shipments, up to $169.4 million from $131.4 million in 1967. Since the South is an increasingly important market, the production of scales and balances could prove to be a manufacturing opportunity for Georgia.

Table 1

LOCATION OF MANUFACTURERS* OF SCALES AND BALANCES, EXCEPT LABORATORY, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 76 | 34 | 6.5 | 140.2 |
| Northeast Region | 25 | 11 | 2.7 | 53.1 |
| North Central Region | 29 | 16 | 3.5 | 77.3 |
| West Region | 17 | 6 | .3 | 8.4 |
| South Region | 5 | 1 | N/A | 1.4 |

* Manufacturers whose primary product is scales and balances, except laboratory.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
| Total Establishments | 76 | 42 | 17 | 13 | 4 |
| All Employees (000) | 6.5 | .2 | .7 | 2.5 | 3.1 |
| Payroll ($000,000) | 45.6 | 1.6 | 5.4 | 16.5 | 22.1 |
| Production Workers (000) | 4.3 | .1 | .5 | 1.7 | 2.0 |
| Man-Hours (000,000) | 8.5 | .4 | 1.1 | 3.2 | 4.0 |
| Wages ($000,000) | 24.0 | 1.0 | 3.1 | 8.3 | 11.7 |
| Value Added by Manufacture ($000,000) | 90.0 | 2.8 | 10.7 | 39.7 | 36.8 |
| Cost of Materials ($000,000) | 51.3 | 2.0 | 7.5 | 22.3 | 19.7 |
| Value of Shipments ($000,000) | 140.2 | 4.8 | 17.9 | 61.3 | 56.3 |
| Capital Expenditures, New ($000,000) | 5.1 | .2 | .4 | 2.5 | 2.0 |

* Manufacturers whose primary product is scales and balances, except laboratory.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF SCALES AND BALANCES, EXCEPT LABORATORY, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 131.4 |
| Motor truck and railroad track scales | 18.8 |
| Industrial scales | |
| Bench and portable | 8.9 |
| Floor scales, including built-in and dormant | 6.9 |
| Predetermined weighing and checkweighing scales, all types except automatic bulk material weighers, fillers, and batching proportioners | 9.9 |
| Automatic bulk material weighers, predetermined weight type, for weighing, filling, batching, and proportioning | 10.6 |
| Miscellaneous industrial scales, including special purpose, crane, suspension, tank, hopper, force measuring devices, and conveyor scales (weigh and feed) for bulk materials | 18.7 |
| Retail and commercial scales | |
| Household and person-weighing scales | |
| Bathroom | 13.8 |
| Person-weighing scales (coin operated and free weighing) and miscellaneous household scales, including kitchen, baby scales, etc. | 1.8 |
| Mailing and parcel post scales | 3.2 |
| Miscellaneous, including computing, noncomputing counter, cotton beams and steel yards, egg-grading scales, and hanging scales for retail use | 19.6 |
| Accessories and attachments (sold separately) | 2.3 |
| Parts for scales and balances (sold for assembly elsewhere, repair, service, etc.) | 8.6 |
| Other scales and balances, not classified by type | 8.3 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF SCALES AND BALANCES, EXCEPT LABORATORY,
1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 131.4 |
| 1966 | 133.8 |
| 1965 | 107.6 |
| 1964 | 91.8 |
| 1963 | 90.0 |
| 1958 | 71.0 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3632 - HOUSEHOLD REFRIGERATORS AND HOME AND FARM FREEZERS

SIC Definition: Establishments primarily engaged in manufacturing household refrigerators and home and farm freezers. Establishments primarily engaged in manufacturing commercial and industrial refrigeration equipment, packaged room coolers, and dehumidifiers are classified in Industry 3585.[1/]

Materials include mill shapes and forms of carbon, alloy, and stainless steel; copper and copper-base alloy; aluminum and aluminum-base alloy; plastics; electric motors and generators; bearings; and paper and paperboard containers.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $984.4 million in shipments of household refrigerators and freezers in 1967 (99% of all shipments of these goods), with secondary products and miscellaneous receipts totaling some $801.0 million. The output of secondary products is clearly important, and includes industrial refrigeration machinery as well as other household appliances. Tables 3 and 4 list all shipments of household refrigerators and freezers, including those produced as secondary products of other industries.

Refrigerators have long been standard equipment in the average American home, and new and improved designs are offered by manufacturers to persuade owners to discard old models, and to compete for the trade of newly formed households. The increase in frozen foods has helped to sell combination refrigerator-freezer units, with designs for new models allocating more and more space to the freezing section. Separate home freezers are becoming common, especially in large households.

The export of household refrigerators has been declining. An estimated 250,000 units were exported in 1960, with a value of $39 million. By 1968 this had decreased to 125,000 units, valued at $22 million. Meanwhile imports of household refrigerators have been showing substantial increases in recent years. From 160,000 units valued at $8.4 million in 1964, imports grew by 1967 to 365,000 units with a value of more than $20 million. Estimates for 1970 total 907,000 units valued at $57.0 million, and in quantity represent some

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1/ This industry is represented in Georgia by 12 companies, seven in the Atlanta Metropolitan Area and one each in Albany, Athens, Augusta, Cordele, and Louisville.

14% of U. S. consumption. Nearly half these imports came from Italy, and are priced lower than similarly sized U. S. models.[1/]

Prices for many of the materials used have been rising, and the recent new wage contracts in the metal industries are causing further increases. As a result, the refrigerator-freezer manufacturers are turning to a greater use of plastics. Plastics are not only declining in price, but can be molded readily and are said to have excellent performance qualities.

In spite of foreign competition, U. S. shipments of refrigerators and freezers have been increasing (Table 4). Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show total estimated shipments in 1969 of $1,180.2 million compared with $987.6 million in 1967. Refrigerators increased from $841.2 million in 1967 to an estimated $1,005.0 million in 1969. Freezers, which had declined from $167.4 million to $142.8 million between 1966 and 1967, rose to an estimated $174.1 million in 1969.

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1/ Business and Defense Services Administration, U. S. Industrial Outlook, 1970 and 1971.

Table 1

LOCATION OF MANUFACTURERS* OF HOUSEHOLD REFRIGERATORS AND FREEZERS, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 36 | 25 | 53.0 | 1,785.4** |
| Northeast Region | 6 | 2 | less than .25 | (D) |
| North Central Region | 22 | 19 | 41.5 | (D) |
| West Region | 2 | 1 | N/A | (D) |
| South Region | 6 | 3 | 2.5 and over | (D) |
| South Atlantic Division | 2 | - | N/A | (D) |
| East South Central Division | 2 | 2 | 2.5 and over | (D) |
| Kentucky | 2 | 2 | 2.5 and over | (D) |
| West South Central Division | 2 | 1 | 1.0 to 2.5 | (D) |
| Arkansas | 2 | 1 | 1.0 to 2.5 | (D) |

* Manufacturers whose primary product is household refrigerators and freezers.

** $1,791.9 elsewhere in Census -- with no explanation for variance.

(D) Withheld to avoid disclosing figures for individual companies.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 50 | 50 to 99 | 100 to 499 | 1,000 or More |
| Total Establishments | 36 | 13 | 4 | 6 | 13 |
| All Employees (000) | 53.0 | .1 | .3 | 1.6 | 50.9 |
| Payroll ($000,000) | 377.8 | .4 | 2.0 | 10.6 | 364.8 |
| Production Workers (000) | 43.9 | .1 | .2 | 1.3 | 42.3 |
| Man-Hours (000,000) | 84.5 | .1 | .5 | 2.7 | 81.1 |
| Wages ($000,000) | 290.2 | .4 | 1.3 | 7.9 | 280.6 |
| Value Added by Manufacture ($000,000) | 796.9 | 1.0 | 3.9 | 19.8 | 772.2 |
| Cost of Materials ($000,000) | 1,029.4 | 1.0 | 4.3 | 24.0 | 1,000.0 |
| Value of Shipments ($000,000) | 1,791.9** | 2.1 | 8.3 | 42.6 | 1,738.8 |
| Capital Expenditures, New ($000,000) | 37.3 | | 1.9 | | 35.4 |

* Manufacturers whose primary product is household refrigerators and freezers.

** See Table 1.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF HOUSEHOLD REFRIGERATORS AND FREEZERS, BY CLASS OF PRODUCT, 1967*

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Total | (X) | 987.6 |
| Household refrigerators, including combination refrigerator-freezers | 4,779.5 | 841.0 |
| Household mechanical refrigerators (including combination refrigerator-freezers) | | |
| 8.4 cubic feet and under | 26.4 | 2.8 |
| 8.5 to 9.4 cubic feet | 54.3 | 5.7 |
| 9.5 to 10.4 cubic feet | 213.2 | 22.4 |
| 10.5 to 11.4 cubic feet | 91.1 | 11.7 |
| 11.5 to 12.4 cubic feet | 1,021.0 | 124.0 |
| 12.5 to 13.4 cubic feet | 175.5 | 21.6 |
| 13.5 to 14.4 cubic feet | 987.6 | 153.1 |
| 14.5 to 15.4 cubic feet | 435.9 | 79.3 |
| 15.5 to 16.4 cubic feet | 747.4 | 148.2 |
| 16.5 to 17.4 cubic feet | 334.1 | 63.6 |
| 17.5 to 18.4 cubic feet | 133.6 | 31.3 |
| 18.5 to 19.4 cubic feet | 182.3 | 54.6 |
| 19.5 cubic feet and over | 378.2 | 113.5 |
| Range-refrigerator and/or sink combination | 24.6 | 7.0 |
| Other household refrigerators, not classified by type | (X) | 2.3 |
| Home and farm freezers | | |
| 10.4 cubic feet and under | 45.4 | 5.1 |
| 10.5 to 12.4 cubic feet | 89.5 | 10.2 |
| 12.5 to 14.4 cubic feet | 78.5 | 9.7 |
| 14.5 to 15.4 cubic feet | | |
| Upright type | 84.1 | 11.3 |
| Chest type | 111.6 | 12.1 |
| 15.5 to 17.4 cubic feet | | |
| Upright type | 199.9 | 29.4 |
| Chest type | 75.2 | 9.7 |
| 17.5 to 19.4 cubic feet | | |
| Upright type | 128.8 | 20.0 |
| Chest type | 26.7 | 3.2 |
| 19.5 to 21.4 cubic feet (upright and chest types) | 76.0 | 10.7 |
| 21.5 to 23.4 cubic feet (upright and chest types) | 88.9 | 13.0 |

(continued)

Table 3 (continued)

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| 23.5 cubic feet and over (upright and chest types) | 34.8 | 6.3 |
| Home and farm freezers, not classified by type | (X) | 1.7 |
| Household refrigerators and freezers, not classified by type | (X) | 3.6 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF HOUSEHOLD REFRIGERATORS AND FREEZERS, 1958, 1963 TO 1967
(in millions of dollars)

| | Total* | Household Refrigerators, Including Combination Refrigerator Freezers | Home and Farm Freezers |
|---|---|---|---|
| 1967 | 987.6 | 841.2 | 142.8 |
| 1966 | 973.5 | 805.6 | 167.4 |
| 1965 | 960.5 | 796.2 | 163.8 |
| 1964 | 896.1 | 742.5 | 152.8 |
| 1963 | 831.8 | 687.9 | 143.1 |
| 1958 | 729.2 | 551.2 | - |

* Includes amounts for shipments, not classified by type.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3633 - HOUSEHOLD LAUNDRY EQUIPMENT

SIC Definition: Establishments primarily engaged in manufacturing laundry equipment, such as washing machines, wringers, driers, and ironers, for household use. Establishments primarily engaged in manufacturing commercial laundry equipment are classified in Industry 3582.[1/]

Materials include mill shapes and forms of carbon, alloy, and stainless steel; copper and copper-base alloy; aluminum and aluminum-base alloy; castings of iron, aluminum, and aluminum-base alloy; plastics; electric motors and generators; and paper and paperboard containers.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $838.9 million in shipments of household laundry equipment in 1967 (90% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $143.6 million. Tables 3 and 4 list all shipments of household laundry equipment, including those produced as secondary products of other industries.

The market for household laundry equipment in this country is not quite as wide as that for refrigerators. Most apartment complexes, for example, have a utility room where laundry equipment is available for use by all the tenants, and many households rely on public laundromats. There is a steady demand, however, from new home buyers, and many households that have washing machines do not own dryers, and hence are potential buyers. In addition, the industry makes a continuing effort to stimulate the market by introducing improvements into their products, such as the recent innovations of variable cycles and water temperatures to handle new types of fabric.

The use of plastics in the manufacture of laundry equipment is expected to increase substantially. Prices of plastics have been declining while the cost of hard metals has been rising. In addition to being easily molded, plastics used in washing machines are impervious to the effects of bleach and chemical detergents. It is reported that "64 separate components in a clothes washer could be made of plastic. These range from a tub made of polypropylene

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1/ This industry is represented in Georgia by one company located in Atlanta.

to nameplates and other small decorative elements which can be formed of polystyrene."[1]

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate continued growth in this industry, with shipments of household laundry equipment reaching an estimated $1,074.8 million in 1969 compared with $931.7 million in 1967.

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Table 1

LOCATION OF MANUFACTURERS* OF HOUSEHOLD LAUNDRY EQUIPMENT, 1967

| | Establishments | | |
|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) |
| United States | 35 | 28 | 22.2 |
| Northeast Region | 3 | 2 | .5 to 1.0 |
| North Central Region | 30 | 25 | 2.5 and over |
| West Region | 1 | - | N/A |
| South Region | 1 | 1 | 2.5 and over |
| East South Central Division | 1 | 1 | 2.5 and over |
| Kentucky | 1 | 1 | 2.5 and over |

* Manufacturers whose primary product is household laundry equipment.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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1/ Business and Defense Services Administration, U. S. Industrial Outlook, 1970.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | | Under 50 | 50 to 99 | 100 to 249 | 250 to 999 | 1,000 or More |
| Total Establishments | 35 | 9 | 6 | 5 | 6 | 9 |
| All Employees (000) | 22.2 | .1 | .5 | .9 | 2.6 | 18.1 |
| Payroll ($000,000) | 154.2 | 1.0 | 3.3 | 5.2 | 16.9 | 127.7 |
| Production Workers (000) | 17.8 | ** | .4 | .6 | 1.9 | 14.8 |
| Man-Hours (000,000) | 33.7 | .1 | .8 | 1.3 | 4.0 | 27.5 |
| Wages ($000,000) | 113.8 | .4 | 2.4 | 3.5 | 11.7 | 95.8 |
| Value Added by Manufacture ($000,000) | 408.4 | 1.1 | 6.5 | 6.4 | 31.9 | 362.5 |
| Cost of Materials ($000,000) | 562.3 | 3.7 | 11.1 | 10.3 | 55.8 | 481.3 |
| Value of Shipments ($000,000) | 982.5 | 4.7 | 17.4 | 16.7 | 90.1 | 853.5 |
| Capital Expenditures, New ($000,000) | 31.8 | | 12.4 | | | 19.2 |

* Manufacturers whose primary product is household laundry equipment.

** Under 50 employees.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF HOUSEHOLD LAUNDRY EQUIPMENT, BY CLASS OF PRODUCT, 1967*

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Total | (X) | 931.7 |
| Household mechanical washing machines, dryers, and washer-dryer combinations | (X) | 843.2 |
| Washing machines, mechanical, including those with dishwasher attachments | | |
| Standard size, electrically driven | | |
| Fully automatic and semiautomatic | 4,085.1 | 531.6 |
| Nonautomatic, wringer type and spinner type | 442.4 | 36.8 |
| All other, including gasoline-driven and small size | N/A | .3 |
| Dryers, mechanical | | |
| Gas | 823.7 | 87.8 |
| Electric | 1,853.1 | 171.6 |
| Washer-dryer combinations, gas and electric (in one cabinet) | 68.4 | 15.1 |
| Other household laundry equipment and parts | (X) | 83.8 |
| Other household laundry equipment, including wringers | (X) | 8.1 |
| Parts, accessories, and attachments for household laundry equipment, sold separately | (X) | 75.7 |
| Other household laundry equipment, not classified by type | (X) | 4.7 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF HOUSEHOLD LAUNDRY EQUIPMENT, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 931.7 |
| 1966 | 917.6 |
| 1965 | 871.4 |
| 1964 | 806.3 |
| 1963 | 766.1 |
| 1958 | 719.6 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3635 - HOUSEHOLD VACUUM CLEANERS

SIC Definition: Establishments primarily engaged in manufacturing vacuum cleaners for household use. Establishments primarily engaged in manufacturing vacuum cleaners for industrial use are classified in Industry 3589,[1/] and those performing installation of built-in vacuum cleaner systems in Industry 1796.[2/]

Materials used include mill shapes and forms of carbon, alloy, and stainless steel; copper and copper-base alloy; aluminum and aluminum-base alloy; castings of iron, aluminum, and aluminum-base alloy; electric motors and generators; and paper and paperboard containers.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $212.9 million in shipments of household vacuum cleaners in 1967 (84% of all shipments of these goods), with secondary products (chiefly other household appliances) and miscellaneous receipts totaling $80.3 million. Tables 3 and 4 list all shipments of household vacuum cleaners, including those produced as secondary products of other industries.

Sales of vacuum cleaners have increased steadily in recent years, and market prospects still look good. New families will continue to form a basic market, and improved models will help to stimulate demand. In addition there is a sizable potential in the increasing affluence of many families who do not yet own vacuum cleaners.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) confirm the continued growth of the industry, with shipments of household vacuum cleaners estimated at $309.6 million in 1969 compared with $254.5 million in 1967.

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1/ SIC 3589 - Service Industry Machines Not Elsewhere Classified includes a wide range of industrial machines (in addition to vacuum cleaners for industrial use), such as commercial dishwashers, cooking equipment, scrubbing machines, floor sanding machines, etc. In the 1971 Georgia Manufacturing Directory, 12 companies are listed in this category, but their varied products do not include vacuum cleaners.

2/ Part of the construction industry.

Table 1

LOCATION OF MANUFACTURERS* OF HOUSEHOLD VACUUM CLEANERS, 1967

| | Establishments | | Total Employees (000) |
|---|---|---|---|
| | Total | With 20 Employees or More | |
| United States | 34 | 17 | 9.2 |
| Northeast Region | 9 | 6 | 1.0 to 2.5 |
| North Central Region | 17 | 7 | 2.5 and over |
| West Region | 3 | 2 | less than .25 |
| South Region | 5 | 2 | .25 to .5 |
| South Atlantic Division | 2 | 1 | .25 to .5 |
| Georgia** | 1 | 1 | less than .25 |

* Manufacturers whose primary product is household vacuum cleaners.

** McRae Products (Sunbeam Corporation), established in McRae (Telfair County) in 1965, is recorded in the 1971 Georgia Manufacturing Directory as manufacturing electric blankets, humidifiers, vaporizers, and injection molding. The 1969 Directory listed vacuum cleaners, electric blankets, floorpolishers, and hedge trimmers for this company.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 50 | 50 to 99 | 100 to 999 | 1,000 or More |
| Total Establishments | 34 | 22 | 3 | 5 | 4 |
| All Employees (000) | 9.2 | .3 | .2 | 1.5 | 7.2 |
| Payroll ($000,000) | 58.8 | 1.3 | 1.1 | 10.9 | 45.5 |
| Production Workers (000) | 7.1 | .1 | .2 | 1.3 | 5.5 |
| Man-Hours (000,000) | 13.2 | .4 | .3 | 2.3 | 10.2 |
| Wages ($000,000) | 39.6 | .9 | .7 | 7.2 | 30.8 |
| Value Added by Manufacture (000,000) | 181.4 | 3.5 | 1.4 | 30.6 | 145.9 |
| Cost of Materials ($000,000) | 116.5 | 3.1 | 3.2 | 32.9 | 77.3 |
| Value of Shipments ($000,000) | 293.2 | 6.4 | 4.7 | 63.6 | 218.5 |
| Capital Expenditures, New ($000,000) | 6.5 | | .1 | 1.0 | 5.4 |

* Manufacturers whose primary product is household vacuum cleaners.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENT OF HOUSEHOLD VACUUM CLEANERS, BY CLASS OF PRODUCT, 1967*

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Total household vacuum cleaners, including parts and attachments | (X) | 254.5 |
| Hand type | 129.5 | 2.0 |
| Upright, tank, canister, and other general purpose household type | 6,071.7 | 208.6 |
| Complete power units, central system type | 25.0 | 3.3 |
| Attachments and cleaning tools, sold separately | (X) | 17.8 |
| Parts for household type vacuum cleaners | (X) | 19.0 |
| Household vacuum cleaners, not classified | (X) | 3.7 |

* Includes shipments of establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF HOUSEHOLD VACUUM CLEANERS, 1958, 1963 TO 1967 (in millions of dollars)

| | |
|---|---|
| 1967 | 254.5 |
| 1966 | 233.9 |
| 1965 | 221.2 |
| 1964 | 193.5 |
| 1963 | 183.1 |
| 1958 | 155.6 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3639 - HOUSEHOLD APPLIANCES, NOT ELSEWHERE CLASSIFIED

SIC Definition: Establishments primarily engaged in manufacturing household appliances, not elsewhere classified, such as hot water heaters, dishwashers, and food waste disposal units.

Materials include mill shapes and forms of carbon, alloy, and stainless steel; copper and copper-base alloy; aluminum and aluminum-base alloy; castings of iron, aluminum, and aluminum-base alloy; plastics; electric motors and generators; paper and paperboard containers.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $403.7 million in shipments of household appliances (not elsewhere classified) in 1967 (79% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $76.2 million. Tables 3 and 4 list all shipments of household appliances, n.e.c., including those produced as secondary products of other industries.

In this group of appliances, dishwashers have had the most noticeable growth in recent years. Value of shipments increased by over 63% between 1963 and 1967. New models have included features giving greater convenience, adding to the growing popularity of this laborsaving device. Many young adults are beginning to regard it as an essential part of their kitchen equipment, especially young married couples who both go out to work. Food waste disposers are also enjoying increasing popularity.

Both items have an immense potential market. They are regular features of new luxury apartments and form part of the built-in equipment of many new single-family houses as well as being favored purchases for established homes.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show continued growth in the industry, with total shipments in 1969 estimated at $588.3 million, compared with $510.2 million in 1967.

Table 1

LOCATION OF MANUFACTURERS* OF HOUSEHOLD APPLIANCES, NOT ELSEWHERE CLASSIFIED, 1967

| | Establishments | | Total Employees (000) |
|---|---|---|---|
| | Total | With 20 Employees or More | |
| United States | 83 | 54 | 13.4 |
| Northeast Region | 17 | 12 | 1.6 |
| North Central Region | 28 | 17 | 2.5 and over |
| West | 19 | 12 | 2.9 |
| South Region | 19 | 13 | 2.5 and over |
| South Atlantic Division | 5 | 2 | less than .25 |
| Maryland | 1 | 1 | less than .25 |
| East South Central Division | 11 | 10 | 2.5 and over |
| Kentucky | 3 | 3 | 1.0 to 2.5 |
| Tennessee | 7 | 6 | 1.0 to 2.5 |
| West South Central | 3 | 1 | N/A |

* Manufacturers whose primary product is household appliances, n.e.c.

N/A - Not available.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | | Under 20 | 20 to 99 | 100 to 499 | 500 to 999 | 1,000 to 2,499 |
| Total Establishments | 83 | 29 | 25 | 20 | 6 | 3 |
| All Employees (000) | 13.4 | .2 | 1.2 | 4.3 | 4.3 | 3.6 |
| Payroll ($000,000) | 90.9 | 1.0 | 7.0 | 27.0 | 30.1 | 25.7 |
| Production Workers (000) | 10.0 | .1 | .8 | 3.1 | 3.3 | 2.6 |
| Man-Hours (000,000) | 20.6 | .2 | 1.8 | 6.6 | 6.7 | 5.4 |
| Wages ($000,000) | 60.1 | .5 | 4.6 | 17.7 | 20.2 | 17.2 |
| Value Added by Manufacture (000,000) | 217.7 | 2.2 | 18.6 | 65.3 | 63.8 | 68.0 |
| Cost of Materials ($000,000) | 265.6 | 2.2 | 38.6 | 78.8 | 76.3 | 69.6 |
| Value of Shipments ($000,000) | 479.9 | 4.5 | 55.4 | 141.0 | 141.9 | 137.1 |
| Capital Expenditures, New ($000,000) | 10.7 | .1 | 1.1 | 5.2 | 2.3 | 2.0 |

* Manufacturers whose primary product is household appliances, n.e.c.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF HOUSEHOLD APPLIANCES, NOT ELSEWHERE CLASSIFIED, 1967*

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Total | (X) | 510.2 |
| Water heaters, electric | (X) | 63.4 |
| Storage type | | |
| 34 gallons and under | 431.2 | 13.8 |
| 35-44 gallons | 400.9 | 16.1 |
| 45-54 gallons | 467.7 | 20.4 |
| 55 gallons and over | 151.8 | 10.3 |
| Other types, including circulating and portable storage | (X) | 2.6 |
| Water heaters, except electric | (X) | 130.1 |
| Direct-fired water heaters | | |
| Gas | 2,871.8 | 118.7 |
| Oil | 13.5 | 2.0 |
| Indirect water heaters | | |
| Storage, cast or coil-type (less tank) | 6.1 | .6 |
| Tanks (with or without generator coils) | 2.8 | 3.7 |
| Instantaneous | 174.0 | 10.0 |
| Generator coils and tank collar (sold without tank) | 5.7 | 1.0 |
| Other household appliances and parts | (X) | 298.5 |
| Dishwashing machines | | |
| Portable type, including convertible type | 604.4 | 71.1 |
| Built-in type | 977.5 | 128.0 |
| Floor waxing and polishing machines | 1,410.3 | 29.8 |
| Food waste disposers (all sizes) | 1,498.5 | 43.5 |
| Other appliances, parts, and accessories | (X) | 26.2 |
| Other household appliances, n.e.c., not classified by type | (X) | 18.2 |

* Includes shipments of establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF HOUSEHOLD APPLIANCES,
NOT ELSEWHERE CLASSIFIED, 1958, 1963 TO 1967
(in millions of dollars)

| | Total | Water Heaters | | Dish-washers | Floor Waxers and Polishers | Food Waste Disposers | All Other |
|---|---|---|---|---|---|---|---|
| | | Electric | Other | | | | |
| 1967 | 510.2 | 63.4 | 130.1 | 199.1 | 29.8 | 43.5 | 44.3 |
| 1966 | 491.3 | 65.6 | 131.6 | N/A | N/A | N/A | N/A |
| 1965 | 479.4 | 66.0 | 141.1 | N/A | N/A | N/A | N/A |
| 1964 | 448.2 | 66.8 | 142.1 | N/A | N/A | N/A | N/A |
| 1963 | 415.7 | 61.4 | 142.2 | 121.8 | 29.4 | 34.4 | 26.5 |
| 1958 | 351.7 | 56.8 | 163.8 | 54.8 | 19.5 | 26.8 | 30.0 |

N/A - Not available.

Sources: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3641 - ELECTRIC LAMPS

SIC Definition: Establishments primarily engaged in manufacturing electric bulbs, tubes, and related light sources. Important products of this industry include incandescent filament lamps, vapor and fluorescent lamps, photoflash and photoflood lamps, electrotherapeutic lamp units for ultraviolet and infrared radiation, and other electric light sources. Establishments primarily engaged in manufacturing glass blanks for bulbs are classified in Industry 3229;[1/] and lamp components, such as supports, filaments, lead-in wires and cold cathode fluorescent lamp electrodes, in Industry 3699.[2/]

Materials used include mill shapes and forms of copper and copper-base alloy; glass; tungsten; plastic; various gases; paper and paperboard containers.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $720.3 million in shipments of electric lamps in 1967 (95% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $61.5 million. Tables 3 and 4 list all shipments of electric lamps, including those produced as secondary products of other industries.

The fastest growing section of this industry in recent years has been photographic bulbs, with manufacturers' shipments more than doubling between 1963 and 1967. Current records show a slowdown in this growth, attributed to the uncertain state of the national economy and the resultant cutback by consumers in recreational and hobby spending. Residential and commercial demands have continued to expand, however, especially with the emphasis on better lighting in streets and public buildings as deterrents to accidents and crime.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) give estimated total shipments in 1969 of $826.0 million, an increase of 9% over the 1967 figure of $756.4 million, but a drop from the 1968 estimate of $841.4 million. The general outlook for the industry is good, however, with steady growth of residential and commercial markets, and continued overall growth in the more cyclical photographic sector. New developments, particularly in high-intensity lighting, will be an added stimulant to the market.

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1/ See page 53.

2/ Represented in Georgia by three small companies -- two in Atlanta and one in Savannah.

Table 1

LOCATION OF ELECTRIC LAMP MANUFACTURERS*, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 106 | 65 | 29.5 | 781.8 |
| Northeast Region | 50 | 29 | 12.7 | 300.9 |
| North Central Region | 32 | 20 | 2.5 and over | (D) |
| West Region | 8 | 4 | .2 | 3.0 |
| South Region | 16 | 12 | 2.5 and over | (D) |
| South Atlantic Division | 4 | 2 | 1.0 to 2.5 | (D) |
| West Virginia | 1 | 1 | 1.0 to 2.5 | (D) |
| South Carolina | 1 | 1 | less than .25 | (D) |
| East South Central Division | 10 | 9 | 2.5 and over | (D) |
| Kentucky | 6 | 5 | 1.0 to 2.5 | (D) |
| Tennessee | 2 | 2 | 1.0 to 2.5 | (D) |
| Alabama | 1 | 1 | .5 to 1.0 | (D) |
| Mississippi | 1 | 1 | .25 to .5 | (D) |
| West South Central Division | 2 | 1 | .5 to 1.0 | (D) |
| Arkansas | 1 | 1 | .5 to 1.0 | (D) |

* Manufacturers whose primary product is electric lamps.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | | Under 20 | 20 to 99 | 100 to 499 | 500 to 999 | 1,000 or More |
| Total Establishments | 106 | 41 | 17 | 26 | 16 | 6 |
| All Employees (000) | 29.5 | .2 | .7 | 7.3 | 11.4 | 9.9 |
| Payroll ($000,000) | 169.9 | 1.0 | 3.5 | 39.6 | 62.3 | 63.3 |
| Production Workers (000) | 25.8 | .2 | .6 | 6.2 | 10.3 | 8.5 |
| Man-Hours (000,000) | 49.9 | .3 | 1.2 | 12.0 | 19.5 | 16.9 |
| Wages ($000,000) | 136.0 | .9 | 2.8 | 30.5 | 52.1 | 49.9 |
| Value Added by Manufacture ($000,000) | 533.4 | 2.3 | 8.8 | 122.6 | 224.1 | 175.6 |
| Cost of Materials ($000,000) | 252.6 | 1.4 | 8.4 | 80.9 | 104.5 | 57.3 |
| Value of Shipments ($000,000) | 781.8 | 3.7 | 17.0 | 203.6 | 325.4 | 232.1 |
| Capital Expenditures, New ($000,000) | 48.2 | (D) | (D) | (D) | 13.6 | 9.6 |

* Manufacturers whose primary product is electric lamps.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF ELECTRIC LAMPS, 1967*

| | Bulbs (000,000) | Value ($000,000) |
|---|---|---|
| Total | (X) | 756.4 |
| Photographic, incandescent | 1,468.7 | 131.0 |
| Photoflash, including blue | 1,454.3 | 104.1 |
| Projection - bulk packed | 2.8 | 5.4 |
| Projection - all other | 6.8 | 15.4 |
| Photoflood, photo-enlarger, and other photolamps | 4.8 | 6.1 |
| Large incandescent, except photographic and Christmas tree | 1,398.4 | 263.3 |
| General lighting | 1,059.6 | 141.4 |
| 3-light | 39.4 | 11.8 |
| Reflector | 37.1 | 35.8 |
| Infrared (all types, including quartz) | 4.0 | 5.8 |
| Traffic and street lighting | 13.7 | 4.4 |
| Rough and vibration service | 31.7 | 7.5 |
| All other large incandescent (special purpose) | 213.0 | 56.5 |
| Miniature incandescent | 839.1 | 123.8 |
| Automobile glass and metal sealed beams | 75.1 | 50.0 |
| Other automobile miniature | 517.7 | 38.2 |
| Flashlight | 69.4 | 3.7 |
| Radio panel | 57.2 | 2.6 |
| All other miniatures | 119.7 | 29.3 |
| Electrical discharge, except Christmas tree | 322.5 | 209.4 |
| Germicidal, sterile, bacterial, and ozone | .6 | 1.1 |
| Sun lamps bulbs | .7 | 3.2 |
| Fluorescent, hot cathode | 233.8 | 166.5 |
| Miscellaneous | 87.3 | 38.6 |
| Christmas tree lamps | 245.6 | 15.3 |
| All other | (X) | 13.6 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF ELECTRIC LAMPS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 756.4 |
| 1966 | 699.9 |
| 1965 | 643.1 |
| 1964 | 576.2 |
| 1963 | 545.9 |
| 1958 | 393.6 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3674 - SEMICONDUCTORS AND RELATED DEVICES

SIC Definition: Establishments primarily engaged in manufacturing semiconductor and related solid state devices, such as semiconductor diodes and stacks, including rectifiers, integrated microcircuits (semiconductor networks), transistors, solar cells, and light sensitive semiconductor (solid state) devices.

Materials include mill shapes and forms of carbon, alloy, and stainless steel, aluminum and aluminum-base alloy, copper and copper-base alloy, nickel and nickel-base alloy; castings of steel, aluminum and aluminum-base alloy, copper and copper-base alloy; metal powders; silicon; germanium; tantalum mill products; molybdenum; tungsten wire; glass and glass products; thermoplastic resins; thermosetting resins; fractional horsepower electric motors; containers and packing materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $1,014.8 million in shipments of semiconductors and related devices in 1967 (87% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $126.2 million. Tables 3 and 4 list all shipments of semiconductors and related devices, including those produced as secondary products of other industries.

Semiconductors are usually produced to sell to the manufacturers of the many sophisticated electronic products now used in industry, in defense, and in the average home. A small portion of the output goes to distributors for maintenance purposes. Most large corporations in this industry manufacture semiconductors as part of a wide range of electronic components, some of which may be used in their own plants in assembling the final product. Small companies tend to specialize in a single component.

This is a strongly competitive industry, and some companies have already established plants in the South to take advantage of plentiful labor and comparatively low wage rates. Plants also have been opened in Europe to compete for their markets, and in the Far East to take advantage of low-cost labor. Some of the products of these overseas operations return to compete with domestic output.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show continued growth in the industry, with total shipments in

1969 estimated at $1,492.9 million compared with $1,162.0 million in 1967. Most of this growth came in integrated microcircuits which increased from $247.5 million in shipments in 1967 to an estimated $479.5 million in 1969.

Table 1

LOCATION OF MANUFACTURERS* OF SEMICONDUCTORS AND RELATED DEVICES, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 177 | 117 | 85.4 | 1,141.0 |
| Northeast Region | 84 | 60 | 36.3 | 488.6 |
| North Central Region | 20 | 10 | 2.5 and over | (D) |
| West Region | 54 | 39 | 28.7 | 397.7 |
| South Region | 19 | 8 | 2.5 and over | (D) |
| South Atlantic Division | 13 | 6 | 2.5 and over | (D) |
| Maryland | 4 | 2 | 1.0 to 2.5 | (D) |
| Virginia | 2 | 1 | .25 to .5 | (D) |
| North Carolina | 2 | 1 | less than .25 | (D) |
| Florida | 4 | 2 | 1.0 to 2.5 | (D) |
| West South Central Division | 4 | 2 | 2.5 and over | (D) |
| Texas | 4 | 2 | 2.5 and over | (D) |

* Manufacturers whose primary product is semiconductors.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | | |
|---|---|---|---|---|---|---|
| | | Under 20 | 20 to 99 | 100 to 499 | 500 to 999 | 1,000 or More |
| Total Establishments | 177 | 60 | 38 | 40 | 20 | 19 |
| All Employees (000) | 85.4 | .3 | 1.9 | 9.3 | 15.4 | 58.4 |
| Payroll ($000,000) | 545.1 | 2.1 | 11.5 | 52.2 | 93.5 | 386.0 |
| Production Workers (000) | 58.0 | .3 | 1.4 | 6.8 | 11.0 | 38.7 |
| Man-Hours (000,000) | 118.1 | .4 | 2.8 | 13.4 | 21.7 | 80.0 |
| Wages ($000,000) | 307.3 | .9 | 6.8 | 28.0 | 53.1 | 218.6 |
| Value Added by Manufacture ($000,000) | 820.2 | 3.2 | 22.7 | 99.9 | 143.5 | 551.0 |
| Cost of Materials ($000,000) | 337.6 | 1.7 | 7.8 | 43.4 | 61.2 | 223.5 |
| Value of Shipments ($000,000) | 1,141.0 | 4.9 | 29.9 | 141.7 | 194.2 | 770.4 |
| Capital Expenditures, New ($000,000) | 131.1 | 5.1 | | 11.8 | 25.5 | 88.7 |

* Manufacturers whose primary product is semiconductors.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

VALUE OF SHIPMENTS OF SEMICONDUCTORS AND RELATED DEVICES, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 1,162.0 |
| Integrated microcircuits (semiconductor networks) | 247.5 |
| Transistors | 447.0 |
| Diodes and rectifiers | 287.5 |
| Other semiconductor devices, including those not classified by type | 180.0 |

* Includes shipments of establishments classified in other industries, shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF SEMICONDUCTORS AND RELATED DEVICES, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 1,162.0 |
| 1966 | 1,068.3 |
| 1965 | 838.6 |
| 1964 | 637.9 |
| 1963 | 623.3 |
| 1958 | 236.7 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3692 - PRIMARY BATTERIES, DRY AND WET

SIC Definition: Primary batteries, dry and wet.

Materials include zinc and zinc-base alloy mill shapes and forms; carbon and graphite electrodes and other carbon and graphite products for electrical use; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $283.2 million in shipments of primary batteries, dry and wet, in 1967 (86% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $24.4 million. Tables 3 and 4 list all shipments of primary batteries, dry and wet, including those produced as secondary products of other industries.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show a decrease in shipments of primary batteries from $327.9 million in 1967 to an estimated $305.7 million in 1968, followed by a moderate advance to $313.1 million in 1969. Earlier years (Table 4) show substantial growth, and in general the market for such batteries appears strong, with steady demand for their use in radios and flashlights, and an increasing use in battery-operated toys.

Table 1

LOCATION OF MANUFACTURERS* OF PRIMARY BATTERIES, DRY AND WET, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 49 | 36 | 11.0 | 307.6 |
| Northeast Region | 13 | 12 | 2.5 and over | (D) |
| North Central Region | 15 | 13 | 5.2 | 135.2 |
| West Region | 8 | 1 | (D) | (D) |
| South Region | 13 | 10 | 2.5 and over | (D) |
| South Atlantic Division | 9 | 8 | 2.5 and over | (D) |
| Maryland | 3 | 2 | .25 to .5 | (D) |
| North Carolina | 5 | 5 | 1.0 to 2.5 | (D) |
| East South Central Division | 2 | 1 | .25 to .5 | (D) |
| Tennessee | 2 | 1 | .25 to .5 | (D) |
| West South Central Division | 2 | 1 | (D) | (D) |

* Manufacturers whose primary product is primary batteries, dry and wet.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
| Total Establishments | 49 | 13 | 13 | 16 | 7 |
| All Employees (000) | 11.0 | .1 | .8 | 4.8 | 5.3 |
| Payroll ($000,000) | 61.0 | .3 | 4.0 | 25.3 | 31.5 |
| Production Workers (000) | 8.9 | (D) | .7 | 4.0 | 4.3 |
| Man-Hours (000,000) | 17.6 | .1 | 1.4 | 7.9 | 8.2 |
| Wages ($000,000) | 43.2 | .3 | 3.2 | 18.7 | 21.1 |
| Value Added by Manufacture ($000,000) | 188.7 | .8 | 8.6 | 83.3 | 96.1 |
| Cost of Materials ($000,000) | 122.0 | .4 | 5.6 | 53.3 | 62.7 |
| Value of Shipments ($000,000) | 307.6 | 1.1 | 14.0 | 135.9 | 156.5 |
| Capital Expenditures, New ($000,000) | 20.2 | (D) | (D) | (D) | (D) |

* Manufacturers whose primary product is primary batteries, dry and wet.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF PRIMARY BATTERIES, DRY AND WET, BY CLASS OF PRODUCT, 1967* (in millions of dollars)

| | |
|---|---|
| Total | 327.9 |
| Dry cells (Leclanche types), except military | |
| General purpose (6-inch or equivalent) 1.5 volts | 9.0 |
| D size (standard and industrial) floodlight cells (single cells only) | 42.0 |
| Dry cell, military type, including general purpose 1.5 volts, standard flashlight, and portable radio types | 40.5 |
| Wet cell primary batteries | 16.2 |
| Other batteries, including flashlight cells other than "D" size, lantern batteries, radio A-B and C cells, and dry cells (except Leclanche type and military) | 202.2 |
| Parts and supplies for primary batteries | 13.1 |
| Other primary batteries, not classified by type | 4.9 |

* Includes shipments by establishments in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF PRIMARY BATTERIES, DRY AND WET,
1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 327.9 |
| 1966 | 263.6 |
| 1965 | 221.1 |
| 1964 | 203.6 |
| 1963 | 191.6 |
| 1958 | 135.7 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3693 - RADIOGRAPHIC X-RAY, FLUOROSCOPIC X-RAY, THERAPEUTIC X-RAY, AND OTHER X-RAY APPARATUS AND TUBES; ELECTROMEDICAL AND ELECTROTHERAPEUTIC APPARATUS

SIC Definition: Establishments primarily engaged in manufacturing radiographic X-ray, fluoroscopic X-ray, and therapeutic X-ray apparatus and tubes for medical, industrial, research, and control applications. This industry also includes establishments primarily engaged in manufacturing electromedical and electrotherapeutic apparatus except electrotherapeutic lamp units for ultraviolet and infrared radiation (Industry 3641). Establishments primarily engaged in manufacturing radio receiving type tubes are classified in Industry 3671; television receiving cathode ray tubes in Industry 3672; and transmitting tubes in Industry 3673.

Materials include carbon, alloy, and stainless steel; aluminum and aluminum-base alloy; copper and copper-base alloy; nickel and nickel-base alloy; plastics; glass; electron tubes, solid state semiconductors; silicon; germanium; mica; ferrites; tungsten; fractional horsepower electric motors; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $154.0 million in shipments of X-ray apparatus and tubes in 1967 (86% of all shipments of these goods). Secondary products and miscellaneous receipts totaled $79.2 million, including $58.1 million in resales. Tables 3 and 4 list all shipments of X-ray apparatus and tubes, including those produced as secondary products of other industries.

With the current emphasis on medical benefits and hospital care, and the continued research to improve all types of equipment and instruments used for diagnostic and therapeutic purposes, this industry should continue to expand. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) confirm the trend shown in Table 4, with estimated shipments in 1969 of $211.1 million compared with the 1967 figure of $179.8 million.

Table 1

LOCATION OF MANUFACTURERS* OF X-RAY APPARATUS AND TUBES, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 82 | 41 | 7.9 | 233.2 |
| Northeast Region | 42 | 20 | 1.0 to 2.5 | (D) |
| North Central Region | 20 | 12 | 4.1 | 121.2 |
| West Region | 11 | 4 | .4 | 6.4 |
| South Region | 9 | 5 | 1.0 to 2.5 | (D) |
| South Atlantic Division | 3 | 3 | 1.0 to 2.5 | (D) |
| Maryland | 1 | 1 | .5 to 1.0 | (D) |
| Florida | 2 | 2 | .25 to .5 | (D) |

* Manufacturers whose primary product is X-ray apparatus and tubes.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
| Total Establishments | 82 | 41 | 24 | 13 | 4 |
| All Employees (000) | 7.9 | .1 | 1.2 | 2.5 | 4.2 |
| Payroll ($000,000) | 63.3 | 1.2 | 7.5 | 18.5 | 36.1 |
| Production Workers (000) | 4.3 | .1 | .7 | 1.4 | 2.0 |
| Man-Hours (000,000) | 8.7 | .1 | 1.6 | 3.0 | 4.0 |
| Wages ($000,000) | 26.3 | .5 | 4.1 | 7.8 | 13.8 |
| Value Added by Manufacture ($000,000) | 135.7 | 2.5 | 15.3 | 42.3 | 75.6 |
| Cost of Materials ($000,000) | 104.0 | 1.3 | 10.6 | 22.2 | 69.7 |
| Value of Shipments ($000,000) | 233.2 | 3.8 | 25.9 | 61.1 | 142.4 |
| Capital Expenditures, New ($000,000) | 11.2 | .1 | .9 | 2.3 | 7.9 |

* Manufacturers whose primary product is X-ray apparatus and tubes.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF X-RAY APPARATUS AND TUBES,
BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 179.8 |
| Medical diagnostic and therapeutic electronic equipment, except X-ray | |
| Diathermy equipment | .9 |
| Electrocardiographs | 11.0 |
| Electroencephalographs and other electronic equipment | 42.3 |
| X-ray equipment and accessories (excluding X-ray spectrometers and diffraction equipment) | |
| Medical and dental X-ray and gamma-ray equipment | 68.2 |
| Industrial and scientific X-ray equipment | 24.8 |
| X-ray equipment accessories | 13.3 |
| X-ray tubes and valves, sold separately | 12.1 |
| Other, not classified by type | 7.2 |

* Includes shipments by establishments in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF X-RAY APPARATUS AND TUBES,
1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 179.8 |
| 1966 | 155.6 |
| 1965 | 121.4 |
| 1964 | 117.3 |
| 1963 | 108.6 |
| 1958 | 73.0 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3872 - WATCHCASES

SIC Definition: Watchcases.

Materials include precious metals; other metals; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $43.1 million in shipments of watchcases in 1967 (96% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $12.5 million. Tables 3 and 4 list all shipments of watchcases, including those produced as secondary products of other industries.

Out of 47 watchcase manufacturers in the U. S., 41 are located in New York. Many operations are small -- over a third of the companies have less than five employees. Only one plant in the country has over 1,000 workers.

The making of watchcases has developed as a separate operation from the production of complete watches. Many watch producers are actually engaged in assembling purchased parts -- movements, cases, and crystals -- and there is an increasing trend for the watch movements to be imported (chiefly from Switzerland).

The shipment of watchcases has been growing (Table 4), with the drop shown in 1967 being only a temporary setback. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show estimated shipments up to $56.2 million, compared with the $44.8 million in 1967 and a 1966 figure of $49.9 million.

Table 1

LOCATION OF MANUFACTURERS* OF WATCHCASES, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 47 | 19 | 3.7 | 55.6 |
| Northeast Region | 45 | 18 | 2.5 and over | (D) |
| North Central Region | 1 | 1 | .25 to .5 | (D) |

* Manufacturers whose primary product is watchcases.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | | Under 20 | 20 to 49 | 50 to 249 | 250 to 2,499 |
| Total Establishments | 47 | 28 | 4 | 11 | 4 |
| All Employees (000) | 3.7 | .2 | .1 | 1.1 | 2.3 |
| Payroll ($000,000) | 21.1 | .8 | .9 | 6.6 | 12.9 |
| Production Workers (000) | 3.1 | .1 | .1 | .9 | 2.0 |
| Man-Hours (000,000) | 5.6 | .1 | .3 | 1.7 | 3.5 |
| Wages ($000,000) | 16.6 | .6 | .7 | 5.1 | 10.2 |
| Value Added by Manufacture ($000,000) | 31.3 | 1.4 | 1.5 | 10.2 | 18.2 |
| Cost of Materials ($000,000) | 23.8 | 1.6 | 1.1 | 6.6 | 14.5 |
| Value of Shipments ($000,000) | 55.6 | 3.1 | 2.6 | 16.7 | 33.2 |
| Capital Expenditures, New ($000,000) | .9 | (D) | (D) | .3 | .7 |

* Manufacturers whose primary product is watchcases.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF WATCHCASES, BY CLASS OF PRODUCT, 1967*

| | Quantity (000 units) | Value ($000,000) |
|---|---|---|
| Total | (X) | 44.8 |
| For jeweled watch movements | | |
| Men's wristwatch cases | | |
| Carat gold and platinum | 395.0 | 7.1 |
| Gold-filled | 361.0 | 3.5 |
| Rolled goldplate and sterling silver (including rolled goldplate with steel back) and other metals | 8,121.5 | 14.1 |
| Women's wristwatch cases | | |
| Carat gold and platinum | 562.3 | 6.8 |
| Gold-filled | 119.3 | .6 |
| Rolled goldplate and sterling silver (including rolled goldplate with steel back) | 1,915.7 | 4.0 |
| Other metals | 1,117.4 | 1.5 |
| For nonjeweled or pin-lever watch movements | | |
| Wristwatch cases | | |
| Gold-filled, rolled goldplate, and sterling silver (including rolled goldplate with steel back) | - | - |
| Other metals | N/A | |
| Pocket and other watchcases (all qualities) for jeweled, nonjeweled or pin-lever watch movements | N/A | 2.1 |
| Watchcases, not classified by type | (X) | 5.1 |

* Includes shipments by establishments in other industries and shipping these products as "secondary" products.

N/A - Not available.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

SHIPMENTS OF WATCHCASES, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 44.8 |
| 1966 | 49.9 |
| 1965 | 37.1 |
| 1964 | 29.9 |
| 1963 | 29.4 |
| 1958 | 27.8 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3912 - JEWELERS' FINDINGS AND MATERIALS

SIC Definition: Establishments primarily engaged in manufacturing unassembled jewelry parts, and stock shop products such as sheet, wire, and tubing. Establishments primarily engaged in lapidary work are classified in Industry 3913.

Materials used include precious and nonprecious metals, wire, and tubing.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $108.9 million in shipments of jewelers' findings and materials in 1967 (94% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $19.7 million. Tables 3 and 4 list all shipments of jewelers' findings and materials, including those produced as secondary products of other industries.

This industry is concentrated in the Northeast Region of the U. S. There were 11 small facilities in all the rest of the country in 1967, and they accounted for only a fraction of 1% of total shipments.

The current fashion styles have increased the demand for accessories for both men and women. In addition, the emphasis on individual and unusual jewelry has promoted a great deal of amateur work with handcrafted materials -- generally requiring unassembled jewelry parts for their completion. Since these trends are nationwide, there might well be good opportunities for an increased number of manufacturers of jewelers' findings and materials outside the Northeast -- able to divert some of the local trade now flowing out of the area.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) show the estimated value of all shipments of jewelers' findings and materials for that year reaching $151.5 million, compared with the 1967 Census figure of $115.6 million (Table 4).

Table 1

LOCATION OF MANUFACTURERS* OF JEWELERS' FINDINGS AND MATERIALS, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 232 | 62 | 5.5 | 128.6 |
| Northeast Region | 221 | 62 | 5.5 | 127.8 |
| All Other Regions | 11 | - | N/A | .8 |

* Manufacturers whose primary product is jewelers' findings and materials.

N/A - Not available -- by derivation less than 50 employees, but rounding of other figures may cause this to be underestimated.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 249 | 250 to 999 |
| Total Establishments | 232 | 170 | 52 | 7 | 3 |
| All Employees (000) | 5.5 | 1.0 | 2.3 | 1.0 | 1.2 |
| Payroll ($000,000) | 29.7 | 4.6 | 12.5 | 6.3 | 6.3 |
| Production Workers (000) | 4.6 | .9 | 1.9 | .8 | 1.0 |
| Man-Hours (000,000) | 8.6 | 1.5 | 3.8 | 1.4 | 1.9 |
| Wages ($000,000) | 18.9 | 3.0 | 8.0 | 3.6 | 4.2 |
| Value Added by Manufacture ($000,000) | 57.8 | 9.3 | 24.2 | 11.9 | 12.4 |
| Cost of Materials ($000,000) | 72.0 | 9.6 | 26.9 | 23.7 | 11.7 |
| Value of Shipments ($000,000) | 128.6 | 18.9 | 50.9 | 35.3 | 23.4 |
| Capital Expenditures, New ($000,000) | 1.9 | .4 | .8 | .1 | .6 |

* Manufacturers whose primary product is jewelers' findings and materials.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

VALUE OF SHIPMENTS OF JEWELERS' FINDINGS AND MATERIALS, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 115.6 |
| Jewelers' findings, such as joints, pins, clasps, spring rings, ring blanks, and other unassembled parts | 61.7 |
| Machine chain | 17.7 |
| Gold-filled and rolled goldplate materials | 9.9 |
| Stock shop products, such as flat-stock, wire, and tubing | 13.6 |
| Other, not identified by class | 12.7 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

VALUE OF SHIPMENTS OF JEWELERS' FINDINGS AND MATERIALS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 115.6 |
| 1966 | 99.9 |
| 1965 | 85.2 |
| 1964 | 76.0 |
| 1963 | 70.5 |
| 1958 | 56.8 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3914 - SILVERWARE, PLATED WARE, AND STAINLESS STEELWARE

SIC Definition: Establishments primarily engaged in manufacturing flatware (including knives, forks, and spoons), hollow ware, toiletware, ecclesiastical ware, and related products made of sterling silver; of metal plated with silver, gold, or other metal; of nickel silver; of pewter; or of stainless steel.

Materials used include mill shapes and forms of carbon, alloy, and stainless steel, of aluminum and aluminum base alloy, and of copper and copper base alloy; castings (rough and semifinished) of aluminum and aluminum base alloy, and of copper and copper base alloy; precious metals, all forms, including ingot, sheet, strip, solder, plating, electrodes, etc.; containers and packing materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $302.8 million in shipments of silverware, plated ware, and stainless steelware in 1967 (99% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $36.3 million. Tables 3 and 4 list all shipments of silverware, plated ware, and stainless steelware, including those produced as secondary products of other industries.

Since most of the items made in this industry are for personal household use, demand can be expected to grow with the population. Within the industry, however, the customer is faced with a choice of precious or nonprecious metals. In flatware, sales of stainless steelware in 1967 were far above those of other metals when measured by number of pieces. In dollar value, however, sterling silver and electrosilver plated sales (combined) were greater than those of stainless steel. The dollar value of hollow ware sales, when compared with those of past years, also indicates a continuing demand for articles made of precious metal, side by side with an increasing demand for items of stainless steel and other nonprecious metals.

Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate continued growth, with estimated shipments reaching $329.1 million compared with $305.4 million in 1967 (Table 4).

Table 1

LOCATION OF MANUFACTURERS* OF SILVERWARE, PLATED WARE, AND STAINLESS STEELWARE, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 195 | 82 | 14.9 | 339.1 |
| Northeast Region | 139 | 64 | 13.2 | 309.4 |
| North Central Region | 20 | 7 | .9 | 17.4 |
| West Region | 23 | 6 | .3 | 4.7 |
| South Region | 13 | 5 | .5 | 7.5 |
| South Atlantic Division | 8 | 4 | .4 | 6.9 |
| Maryland | 3 | 2 | .25 to .5 | (D) |

* Manufacturers whose primary product is silverware, plated ware, and stainless steelware.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
| Total Establishments | 195 | 113 | 51 | 24 | 7 |
| All Employees (000) | 14.9 | .6 | 2.1 | 4.8 | 7.4 |
| Payroll ($000,000) | 95.8 | 3.6 | 11.3 | 28.1 | 52.7 |
| Production Workers (000) | 12.6 | .6 | 1.7 | 4.0 | 6.4 |
| Man-Hours (000,000) | 26.4 | 1.0 | 3.4 | 8.2 | 13.7 |
| Wages ($000,000) | 76.5 | 2.8 | 8.0 | 21.1 | 44.6 |
| Value Added by Manufacture ($000,000) | 198.0 | 7.1 | 21.4 | 63.4 | 106.2 |
| Cost of Materials ($000,000) | 148.2 | 5.8 | 19.2 | 40.8 | 82.5 |
| Value of Shipments ($000,000) | 339.1 | 12.7 | 40.9 | 104.8 | 180.7 |
| Capital Expenditures, New ($000,000) | 5.7 | .1 | .4 | 1.6 | 3.6 |

* Manufacturers whose primary product is silverware, plated ware, and stainless steelware.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

VALUE OF SHIPMENTS OF SILVERWARE, PLATED WARE, AND STAINLESS STEELWARE BY CLASS OF PRODUCT, 1967* (in millions of dollars)

| | |
|---|---|
| Total | 305.4 |
| Silverware, plated ware, and stainless steelware | 126.3 |
| Hollow ware (including toiletware, ecclesiastical ware, novelties, trophies, baby goods, and other plated ware) | |
| Sterling silver | 29.9 |
| Electrosilver plated | 61.1 |
| Stainless steel | 9.2 |
| Aluminum, unplated hollow ware of other metals, and hollow ware plated with metals other than silver, stainless steel, and aluminum | 25.0 |
| Other silverware, plated ware, and stainless steelware, not classified by type | 1.1 |
| Flatware (including all knives, forks, spoons, and carving sets made wholly of metal) | 166.8 |
| Sterling silver (1,125,000 dozen) | 66.4 |
| Electrosilver plated -- institutional and noninstitutional (5,157,000 dozen) | 25.3 |
| Stainless steel | |
| Institutional (5,130,000 dozen) | 8.0 |
| Noninstitutional (22,839,000 dozen) | 65.2 |
| Unplated flatware of other metals, and flatware plated with metals other than silver | 1.9 |
| Flatware, not classified by type | ** |
| Other silverware and plated ware, not classified by type | 12.3 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

** Under $50,000.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF SILVERWARE, PLATED WARE, AND STAINLESS STEELWARE, 1958, 1963 TO 1967
(in millions of dollars)

| | Total* | Silverware, Plated Ware, and Stainless Steelware | Flatware |
|---|---|---|---|
| 1967 | 305.4 | 126.3 | 166.8 |
| 1966 | 282.2 | 115.2 | 162.3 |
| 1965 | 254.0 | 100.8 | 148.0 |
| 1964 | 236.3 | 94.2 | 136.9 |
| 1963 | 211.9 | 93.9 | 113.2 |
| 1958 | 178.8 | 74.3 | 97.1 |

* Includes items not classified by type.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3931 - MUSICAL INSTRUMENTS

SIC Definition: Establishments primarily engaged in manufacturing pianos, with or without player attachments; organs; other musical instruments; and parts and materials for musical instruments.

Materials used include rough and dressed lumber; veneer and plywood; fabricated wood components; felt goods; iron and steel mill shapes and forms; copper and copper-base alloy mill shapes and forms; loudspeakers, microphones, tuners; solid state semiconductors; electronic type components; plastics and synthetic resins; and paints, lacquers, varnishes, and enamels.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $391.8 million in shipments of musical instruments and parts in 1967 (98% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $42.5 million. Tables 3 and 4 list all shipments of musical instruments and parts, including those produced as secondary products of other industries.

In spite of the availability of television, radio, record players, and tape recorders, interest in the personal making of music has been maintained. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate that the drop in the value of shipments in 1967 was only temporary. Shipments in 1969 were estimated at $475.9 million, compared with the 1967 figure of $401.2 million.

Table 1

LOCATION OF MANUFACTURERS* OF MUSICAL INSTRUMENTS AND PARTS, 1967

| | Establishments | | | |
|---|---|---|---|---|
| | Total | With 20 Employees or More | Total Employees (000) | Value of Shipments ($000,000) |
| United States | 343 | 121 | 24.9 | 434.3 |
| Northeast Region | 115 | 33 | 4.2 | 63.5 |
| North Central Region | 125 | 58 | 12.9 | 246.1 |
| West Region | 57 | 12 | 2.4 | 41.7 |
| South Region | 46 | 18 | 5.4 | 83.1 |
| South Atlantic Division | 25 | 9 | 1.0 to 2.5 | (D) |
| Maryland | 8 | 3 | .6 | 6.1 |
| North Carolina | 7 | 4 | .5 | 8.2 |
| South Carolina | 1 | 1 | .25 to .5 | (D) |
| East South Central Division | 13 | 6 | 2.5 and over | (D) |
| Tennessee | 8 | 3 | .5 to 1.0 | (D) |
| Mississippi | 3 | 3 | 1.0 to 2.5 | (D) |
| West South Central Division | 8 | 3 | 1.0 to 2.5 | (D) |
| Arkansas | 2 | 2 | .5 to 1.0 | (D) |
| Texas | 5 | 1 | less than .25 | (D) |

* Manufacturers whose primary product is musical instruments and parts.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | | Employment Size of Establishment | | | |
|---|---|---|---|---|---|
| | Total | Under 20 | 20 to 99 | 100 to 499 | 500 to 2,499 |
| Total Establishments | 343 | 222 | 63 | 47 | 11 |
| All Employees (000) | 24.9 | 1.1 | 3.3 | 10.9 | 9.5 |
| Payroll ($000,000) | 143.7 | 5.7 | 19.2 | 64.2 | 54.6 |
| Production Workers (000) | 20.8 | .9 | 2.9 | 9.1 | 7.9 |
| Man-Hours (000,000) | 39.9 | 1.7 | 5.7 | 17.6 | 14.9 |
| Wages ($000,000) | 106.0 | 4.4 | 14.4 | 48.1 | 39.1 |
| Value Added by Manufacture ($000,000) | 237.8 | 10.0 | 34.1 | 99.3 | 94.4 |
| Cost of Materials ($000,000) | 202.4 | 8.1 | 23.7 | 85.1 | 85.5 |
| Value of Shipments ($000,000) | 434.3 | 17.8 | 57.7 | 182.3 | 176.6 |
| Capital Expenditures, New ($000,000) | 10.6 | 3.2 | 1.1 | 3.6 | 2.5 |

* Manufacturers whose primary product is musical instruments and parts.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF MUSICAL INSTRUMENTS AND PARTS, BY CLASS OF PRODUCT, 1967*

| | Value ($000,000) |
|---|---|
| Total | 401.2 |
| Pianos, total | 91.2 |
| Verticals, uprights, or consoles, 37 inches or less in height | 46.0 |
| Verticals, uprights, or consoles, over 37 inches in height | 34.9 |
| Grand pianos | 10.3 |
| Organs, total | 126.2 |
| Pipe and reed | 15.8 |
| Electronic | 110.4 |
| Piano and organ parts, total | 46.0 |
| Piano parts and materials (actions, attachments, strings, tuning pins, etc.), except benches | 36.3 |
| Organ parts and materials, except benches | 9.7 |
| Other musical instruments and parts, total | 123.4 |
| Wind instruments, except organs and accordians | |
| Woodwinds | 23.3 |
| Brass winds | 26.0 |
| Fretted instruments, nonelectronic only (such as guitars, banjos, mandolins, ukeleles, etc.), and string instruments (such as violins, violas, cellos, and basses) | 14.4 |
| Accessories and parts, sold separately, such as reed mouthpieces, music stands, drummers traps, etc., except instrument cases and benches | 18.1 |
| Electronic musical instruments, other than electronic organs | 19.2 |
| Other nonelectronic musical instruments, including harps, accordians, and percussion instruments, such as drums, vibes, etc. | 21.6 |
| Other musical instruments and parts | .7 |
| Other musical instruments and parts, not classified by type | 14.4 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF MUSICAL INSTRUMENTS AND PARTS, 1958, 1963 TO 1967
(in millions of dollars)

| | Total* | Pianos | Organs | Piano and Organ Parts | Other Musical Instruments and Parts |
|---|---|---|---|---|---|
| 1967 | 401.2 | 91.2 | 126.2 | 46.0 | 123.4 |
| 1966 | 434.5 | 98.1 | 146.8 | 52.7 | 133.7 |
| 1965 | 394.5 | 98.6 | 129.8 | 45.5 | 117.0 |
| 1964 | 356.6 | 94.1 | 117.7 | 43.8 | 99.0 |
| 1963 | 319.4 | 87.7 | 107.3 | 42.3 | 77.7 |
| 1958 | 242.1 | 63.7 | 79.4 | 51.1 | 47.9 |

* Includes musical instruments and parts not classified by type.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3943 - CHILDREN'S VEHICLES, EXCEPT BICYCLES

SIC Definition: Establishments primarily engaged in manufacturing baby carriages, strollers, and gocarts; children's velocipedes and tricycles, coaster wagons, play cars, sleds, and other children's outdoor wheel goods and vehicles, except bicycles (Industry 3751).

Materials used include mill shapes and forms of carbon, alloy, and stainless steel, aluminum and aluminum-base alloy, and copper and copper-base alloy; thermoplastic resins and thermosetting resins; broadwoven fabrics; finished leather; fractional horsepower electric motors; and paperboard containers and boxes.

General Data. Manufacturers in this industry (Tables 1 and 2) in 1967 accounted for $60.6 million in shipments of children's vehicles, except bicycles (61% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $18.1 million. Secondary products made in this industry included some $6 million worth of metal household furniture.

Tables 3 and 4 list all shipments of children's vehicles, except bicycles, including those produced as secondary products of other industries. In the years immediately prior to the time of the last Census of Manufactures in 1967, output of these goods appears to have changed very little -- and probably decreased, in spite of the modest increase in total dollar value of shipments, since the figures do not allow for the decrease in the value of the dollar. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census), however, show considerable growth, with an estimated value of shipments of $127.4 million in 1969 compared with the 1967 figure of $99.6 million.

Table 1

LOCATION OF MANUFACTURERS* OF CHILDREN'S VEHICLES, EXCEPT BICYCLES, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 45 | 23 | 3.7 | 78.7 |
| Northeast Region | 19 | 9 | 1.0 | 19.2 |
| North Central Region | 15 | 8 | 1.7 | 39.2 |
| West Region | 5 | 3 | .5 to 1.0 | (D) |
| South Region | 6 | 3 | .25 to .5 | (D) |
| East South Central Division | 3 | 3 | .25 to .5 | (D) |
| Kentucky | 1 | 1 | less than .25 | (D) |
| Alabama | 2 | 2 | .25 to .5 | (D) |

* Manufacturers whose primary product is children's vehicles, except bicycles.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment: Under 100 | 100 to 249 | 250 to 999 |
|---|---|---|---|---|
| Total Establishments | 45 | 33 | 7 | 5 |
| All Employees (000) | 3.7 | .6 | 1.2 | 1.8 |
| Payroll ($000,000) | 19.4 | 3.2 | 5.8 | 10.5 |
| Production Workers (000) | 3.1 | .5 | 1.0 | 1.4 |
| Man-Hours (000,000) | 6.4 | 1.2 | 2.1 | 3.0 |
| Wages ($000,000) | 13.9 | 2.4 | 4.2 | 7.2 |
| Value Added by Manufacture ($000,000) | 38.7 | 5.9 | 12.7 | 20.1 |
| Cost of Materials ($000,000) | 40.9 | 6.4 | 11.8 | 22.9 |
| Value of Shipments ($000,000) | 78.7 | 12.2 | 23.5 | 43.1 |
| Capital Expenditures, New ($000,000) | 3.5 | .2 | .2 | 3.1 |

* Manufacturers whose primary product is children's vehicles, except bicycles.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

VALUE OF SHIPMENTS OF CHILDREN'S VEHICLES, EXCEPT BICYCLES, BY CLASS OF PRODUCT, 1967*

| | Quantity (000,000 units) | Value ($000) |
|---|---|---|
| Total | (X) | 99.6 |
| Baby carriages, including combination carriage-strollers | 320 | 8.2 |
| Strollers | 1,454 | 16.3 |
| Baby walkers | 978 | 3.3 |
| Children's pedal-driven automobiles and tractors | 1,019 | 9.7 |
| Velocipedes (three-wheeled) and tricycles, includ-chain-driven tricycles | 3,271 | 23.7 |
| Sleds | 1,186 | 4.9 |
| Parts for children's vehicles, sold separately | (X) | 1.6 |
| Other children's vehicles, including wagons (coaster, express, and other), scooters, side-walk cycles, three-wheel play cars, etc. | (X) | 28.5 |
| Other children's vehicles, not classified by type | (X) | 3.4 |

* Includes shipments by establishments classified in other industries and shipping these products as "secondary" products.

(X) Not applicable.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 4

VALUE OF SHIPMENTS OF CHILDREN'S VEHICLES, EXCEPT BICYCLES, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 99.6 |
| 1966 | 99.5 |
| 1965 | 99.2 |
| 1964 | 86.5 |
| 1963 | 82.7 |
| 1958 | 72.9 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

## SIC 3996 - LINOLEUM, ASPHALTED-FELT-BASE, AND OTHER HARD-SURFACE FLOOR COVERINGS, NOT ELSEWHERE CLASSIFIED

SIC Definition: Establishments primarily engaged in manufacturing linoleum, asphalted-felt-base, and other hard-surface floor coverings, not elsewhere classified. Establishments primarily engaged in manufacturing rubber floor coverings are classified in Industry 3069, and cork floor and wall tile in Industry 2499.

Materials include asbestos (crude, including fiber); vegetable oils (including crude and processed); vinyl and vinyl copolymer resins; organic and inorganic pigment; containers and packaging materials.

General Data. Manufacturers in this industry (Tables 1 and 2) accounted for $185.5 million in shipments of hard-surface floor coverings in 1967 (97% of all shipments of these goods), with secondary products and miscellaneous receipts totaling $36.1 million. Tables 3 and 4 list all shipments of hard-surface floor coverings, including those produced as secondary products of other industries.

Production is concentrated in the Northeast Region, chiefly in Pennsylvania and New Jersey. Less than 3% of all shipments in 1967 came from all other regions of the U. S. Preprints from the Annual Survey of Manufactures for 1969 (U. S. Bureau of the Census) indicate that the drop in shipments in 1967 (Table 4) was only temporary. Estimated shipments in 1969 were $210.1 million, compared with $191.6 million in 1967 and $194.6 million in 1966.

Table 1

LOCATION OF MANUFACTURERS* OF HARD-SURFACE FLOOR COVERINGS, 1967

| | Establishments | | Total Employees (000) | Value of Shipments ($000,000) |
|---|---|---|---|---|
| | Total | With 20 Employees or More | | |
| United States | 20 | 12 | 6.0 | 221.7 |
| Northeast Region | 13 | 10 | 5.9 | 216.0 |
| All Other Regions | 7 | 2 | .1 | 5.7 |

* Manufacturers whose primary product is hard-surface floor coverings.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 2

GENERAL STATISTICS BY EMPLOYMENT SIZE OF ESTABLISHMENT, 1967*

| | Total | Employment Size of Establishment: Under 100 | 100 to 249 | 250 or More |
|---|---|---|---|---|
| Total Establishments | 20 | 10 | 4 | 6 |
| All Employees (000) | 6.0 | .1 | .6 | 5.3 |
| Payroll ($000,000) | 43.5 | .6 | 4.1 | 38.8 |
| Production Workers (000) | 4.9 | .1 | .5 | 4.2 |
| Man-Hours (000,000) | 10.1 | .2 | 1.2 | 8.7 |
| Wages ($000,000) | 33.2 | .6 | 3.2 | 29.5 |
| Value Added by Manufacture ($000,000) | 133.4 | 2.5 | 6.8 | 124.1 |
| Cost of Materials ($000,000) | 90.4 | 1.1 | 7.8 | 81.6 |
| Value of Shipments ($000,000) | 221.7 | 3.5 | 13.0 | 205.2 |
| Capital Expenditures, New ($000,000) | 20.6 | (D) | (D) | (D) |

* Manufacturers whose primary product is hard-surface floor coverings.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Table 3

SHIPMENTS OF HARD-SURFACE FLOOR COVERINGS, BY CLASS OF PRODUCT, 1967*
(in millions of dollars)

| | |
|---|---|
| Total | 191.6 |
| Sheet goods and tile of linoleum, and enamel coated or printed border rugs and sheet goods of asphalted-felt-base and supported plastic floor covering and wall covering | 30.8 |
| Plastic coated or plastic printed border rugs and sheet goods, including rotogravure printed floor coverings, of asphalted-felt-base and supported plastic | 91.8 |
| Plastic floor, wall, and counter covering (supported, including scrap vinyl backed), sheet goods and tile | 67.8 |
| Other hard surface floor coverings, not classified by type | 1.2 |

* Includes shipments by establishments in other industries and shipping these products as "secondary" products.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

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Table 4

SHIPMENTS OF HARD-SURFACE FLOOR COVERINGS, 1958, 1963 TO 1967
(in millions of dollars)

| | |
|---|---|
| 1967 | 191.6 |
| 1966 | 194.6 |
| 1965 | 192.3 |
| 1964 | 179.2 |
| 1963 | 168.1 |
| 1958 | 151.9 |

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

# APPENDICES

Appendix A

PRODUCTS NOT MADE IN GEORGIA[1/]
(By Four-Digit Standard Industrial Classification)

| Industries (* = Reviewed in this study) | Comment on Industries Not Reviewed |
|---|---|
| **19 Ordnance and Accessories** | |
| 1911 Guns, howitzers, mortars, and related equipment | Chiefly military contract work. Unlikely to transfer or expand from present locations. |
| 1925 Guided missiles and space vehicles, completely assembled | |
| 1931 Tanks and tank components | |
| 1941 Sighting and fire control equipment | |
| 1951 Small arms | |
| 1999 Ordnance and accessories, n.e.c. | |
| **20 Food and Kindred Products** | |
| *2032 Canned specialties | |
| 2043 Cereal preparations | Likely to remain near major sources of raw material |
| 2044 Rice milling | |
| 2061 Cane sugar, except refining only | |
| 2063 Beet sugar | |
| *2072 Chocolate and cocoa products | |
| 2083 Malt | Likely to remain near major sources of raw material |
| *2098 Macaroni, spaghetti, vermicelli, noodles | |
| **21 Tobacco Manufactures** | |
| 2111 Cigarettes | Unlikely to expand in view of campaign against smoking as a health hazard |
| 2131 Tobacco (chewing and smoking) and snuff | |
| 2141 Tobacco stemming and redrying | |

1/ Not in the 1971 Georgia Manufacturing Directory.

| Industries (* = Reviewed in this study) | Comment on Industries Not Reviewed |
|---|---|
| 22 Textile Mill Products | |
| *2292 Lace goods | |
| 2297 Wool scouring, worsted combing, and tow to top mills | Use of wool declining |
| 23 Apparel and Other Finished Products Made from Fabrics and Similar Materials | |
| *2368 Leather and sheep-lined clothing | |
| 24 Lumber and Wood Products | |
| *2445 Cooperage | |
| 26 Paper and Allied Products | |
| *2644 Wallpaper | |
| 28 Chemicals and Allied Products | |
| *2822 Synthetic rubber (vulcanizable elastomers) | |
| 2892 Explosives | Unlikely to expand from present locations |
| 2895 Carbon black | Recent new facilities have been located near largest customers (instead of near raw materials). New facility in Phenix City, Alabama, will serve the rubber industry in the Southeast, so plant for Georgia unlikely. |
| 29 Petroleum Refining and Related Industries | |
| 2999 Products of petroleum and coal, n.e.c. | Likely to remain near major sources of raw materials |
| 30 Rubber and Miscellaneous Plastics Products | |
| *3031 Reclaimed rubber | |

| Industries (* = Reviewed in this study) | Comment on Industries Not Reviewed |
|---|---|
| **31 Leather and Leather Products** | |
| *3131 Boot and shoe cut stock and findings | |
| **32 Stone, Clay, Glass, and Concrete Products** | |
| *3211 Flat glass | |
| *3229 Pressed and blown glass and glassware, n.e.c. | |
| *3262 Vitreous china table and kitchen articles | |
| *3263 Fine earthenware (whiteware) table and kitchen articles | |
| **33 Primary Metal Industries** | |
| 3313 Electrometallurgical products | Would need cheaper electricity to be attracted to Georgia |
| 3316 Cold rolled steel sheet, strip and bars | Likely to remain near major sources of raw materials |
| 3331 Primary smelting and refining of copper | |
| 3332 Primary smelting and refining of lead | |
| 3333 Primary smelting and refining of zinc | |
| *3392 Nonferrous forgings | |
| **34 Fabricated Metal Products, Except Ordnance, Machinery, and Transportation Equipment** | |
| *3492 Safes and vaults | |
| *3496 Collapsible tubes | |
| *3497 Metal foil and leaf | |
| **35 Machinery, Except Electrical** | |
| 3533 Oil field machinery and equipment | Concentration likely to continue in oil-bearing areas |
| *3562 Ball and roller bearings | |

| Industries (* = Reviewed in this study) | Comment on Industries Not Reviewed |
|---|---|
| *3567 Industrial process furnaces and ovens | |
| *3572 Typewriters | |
| *3574 Calculating and accounting machines, except electronic computing equipment | |
| *3576 Scales and balances, except laboratory | |
| **36 Electrical Machinery, Equipment and Supplies** | |
| 3624 Carbon and graphite products | Availability of graphite in Georgia too limited |
| *3632 Household refrigerators and home and farm freezers | |
| *3633 Household laundry equipment | |
| *3635 Household vacuum cleaners | |
| *3639 Household appliances, n.e.c. | |
| *3641 Electric lamps | |
| 3652 Phonograph records | Local advertisements indicate now in Georgia |
| 3671 Radio and television receiving type electron tubes, except cathode ray | Declining industry |
| 3673 Transmitting, industrial, and special purpose electron tubes | Unlikely to locate in Georgia until complex of related industries established |
| *3674 Semiconductors and related devices | |
| *3692 Primary batteries, dry and wet | |
| *3693 Radiographic X-ray, fluoroscopic X-ray, therapeutic X-ray, and other X-ray apparatus | |
| **37 Transportation Equipment** | |
| 3722 Aircraft engines and engine parts | Unlikely to expand from present locations |

| Industries (* = Reviewed in this study) | Comment on Industries Not Reviewed |
|---|---|
| 3723 Aircraft propellers and propeller parts | Now combined with SIC 3729 (aircraft equipment, n.e.c.) |
| 3741 Locomotives and parts | Unlikely to expand from present locations |
| **38 Professional, Scientific, and Controlling Instruments; Photographic and Optical Goods; Watches and Clocks** | |
| *3872 Watchcases | |
| **39 Miscellaneous Manufacturing Industries** | |
| *3912 Jewelers' findings and materials | |
| *3914 Silverware, plated ware, and stainless steelware | |
| *3931 Musical instruments | |
| *3943 Children's vehicles, except bicycles | |
| *3996 Linoleum, asphalted-felt-base, and other hard surface floor coverings, n.e.c. | |

Appendix B

FUELS AND ELECTRIC ENERGY CONSUMED, 1967

| SIC | Industry | Total Energy Used* (kw.-hr. equivalent 000,000) | Total Cost of Purchases** ($000,000) | Electric Energy Purchased (kw.-hrs. 000,000) | Electric Energy Purchased ($000,000) | Gas (cu. ft. 000,000) | Gas ($000,000) | Fuel Oil (barrels 000) | Fuel Oil ($000,000) |
|---|---|---|---|---|---|---|---|---|---|
| 2032 | Canned Specialties | 4,564.0 | 9.5 | 310.0 | 3.2 | 4,008.0 | 2.1 | 561.0 | 1.5 |
| 2072 | Chocolate and Cocoa Products | 1,868.0 | 4.7 | 268.0 | 2.7 | 501.0 | .4 | (D) | (D) |
| 2822 | Synthetic Rubber | 15,832.0 | 24.4 | 1,570.4 | 10.8 | 36,251.1 | 9.1 | 44.6 | .1 |
| 3211 | Flat Glass | 15,647.3 | 28.7 | 988.3 | 8.0 | 36,607.3 | 16.4 | (D) | (D) |
| 3229 | Pressed and Blown Glass, n.e.c. | 18,824.0 | 37.3 | 1,194.8 | 10.2 | 47,599.3 | 21.9 | 478.1 | .9 |
| 3392 | Nonferrous Forgings | 3,150.8 | 6.9 | 360.8 | 3.5 | 3.6 | 2.6 | 109.5 | .3 |
| 3562 | Ball and Roller Bearings | 4,302.0 | 16.0 | 919.9 | 9.5 | 5,781.3 | 4.2 | 386.5 | 1.0 |
| 3632 | Household Refrigerators and Freezers | 5,474.4 | 14.8 | 837.3 | 8.3 | 6,567.6 | 3.3 | (D) | (D) |

* Represents the quantity of purchased electric energy and the kilowatt hours equivalent of all fuels used for heat and power.

** Cost of all purchased electric energy and fuels, including coal, gasoline, LPG, wood, etc.

(D) Withheld to avoid disclosing figures for individual companies.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967.

Appendix C

WATER INTAKE, USE, AND DISCHARGE, 1968*

| SIC | Industry | Establishments Reporting: Number of Establishments | Establishments Reporting: All Employees (000) | Establishments Reporting: Value Added by Manufacture ($000,000) | Total Water Intake (billions of gallons) | Total Water Used, Including Recirculation (billions of gallons) | Total Water Discharged (billions of gallons) |
|---|---|---|---|---|---|---|---|
| 2032 | Canned Specialties | 32 | 20.3 | 528.0 | 17.3 | 22.1 | 14.4 |
| 2822 | Synthetic Rubber | 23 | 11.5 | 387.1 | 62.4 | 338.1 | 57.9 |
| 3031 | Reclaimed Rubber | 5 | .9 | 13.3 | 1.7 | 2.7 | 1.7 |
| 3211 | Flat Glass | 20 | 19.9 | 371.0 | 37.5 | 71.4 | 36.1 |
| 3229 | Pressed and Blown Glass, n.e.c. | 43 | 34.1 | 536.8 | 7.8 | 43.1 | 7.1 |
| 3392 | Nonferrous Forgings | 8 | 7.8 | 114.3 | 2.1 | 5.4 | 2.0 |
| 3497 | Metal Foil and Leaf | 10 | 4.4 | 79.0 | 1.6 | 7.8 | 1.6 |
| 3562 | Ball and Roller Bearings | 32 | 45.2 | 626.8 | 5.4 | 22.0 | 5.1 |
| 3572 | Typewriters | 8 | 21.2 | 376.1 | 2.0 | 3.3 | 2.0 |
| 3574 | Calculating and Accounting Machines | 6 | 10.0 | 157.3 | .5 | .7 | .5 |
| 3632 | Household Refrigerators and Freezers | 11 | 40.9 | 635.3 | 13.1 | 18.1 | 12.7 |
| 3633 | Household Laundry Equipment | 11 | 18.2 | 399.0 | 3.2 | 5.9 | 3.1 |
| 3639 | Household Appliances, n.e.c. | 9 | 7.0 | 122.3 | 1.1 | 2.0 | 1.0 |
| 3641 | Electric Lamps | 21 | 18.5 | 347.1 | 1.7 | 3.6 | 1.5 |
| 3674 | Semiconductors | 26 | 59.1 | 574.3 | 6.5 | 44.0 | 6.1 |
| 3692 | Primary Batteries, Dry and Wet | 11 | 6.6 | 109.7 | .6 | .9 | .6 |
| 3914 | Silverware and Plated Wear | 9 | 6.5 | 90.4 | 4.8 | 5.2 | 3.9 |
| 3931 | Musical Instruments and Parts | 6 | 4.4 | 43.1 | .3 | .3 | .3 |

* In establishments using 20 million gallons or more annually.

Source: U. S. Bureau of the Census, Census of Manufactures, 1967 (special survey).